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**DOCKET** 09-AFC-10

DATE OCT 18 2010

**RECD.** OCT 18 2010

October 18, 2010

California Energy Commission **Dockets Unit** 1516 Ninth Street Sacramento, CA 95814-5512

Subject: RICE SOLAR ENERGY, LLC'S OPENING TESTIMONY (Part 1) RICE SOLAR ENERGY PROJECT

**DOCKET NO. (09-AFC-10)** 

Enclosed for filing with the California Energy Commission is the original of RICE SOLAR ENERGY, LLC'S OPENING TESTIMONY (Part 1) for the Rice Solar Energy Project (09-AFC-10).

Part 1 contains 19 of the 22 SA/DEIS sections that were uncontested or agreed upon between Staff and RSE at the workshops. Biological Resources, Cultural Resources and Worker Safety-Fire Protection are still outstanding with Worker Safety being the only substantive contested matter anticipated. RSE is still working out and will submit with the PHC Statement due Thursday, October 21, the issues that were agreed upon with Staff for Biological and Cultural Resources. RSE reasonably anticipates limited or no testimony for Biological and Cultural Resources.

Sincerely,

Marie Mills

Manilfills

# Rice Solar Energy LLC's Opening Testimony Part 1 (All sections except Biological Resources, Cultural Resources, & Worker Safety-Fire Protection) Rice Solar Energy Project (09-AFC-10) October 18, 2010

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - I prepared the attached testimony relating to Project Description for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original s	signed	
Sc	ott Kamin	ski	 

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF BOB ANDERS

- I, Bob Anders, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Engineer and Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Project Description for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-original signed		
Bob Anders	 	

I. Name(s): Scott Kaminski and Bob Anders

### II. Purpose:

Our testimony addresses the subject of Project Description associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Project Description section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Bob Anders**: I am presently employed at WorleyParsons, and have been for the past 2 years and am presently a Sr. Civil Engineer/Project Manager with that organization. I have an Engineering Degree in Civil Engineering and I have over 25 years of experience in the field of Civil Engineering. I prepared or assisted in the preparation of the Project Description section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

- Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 2.0, Appendix 2A-C.
- Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.
- Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 100 through 107.
- Rice Solar Energy, LLC's Supplementary Information Item 6, Exhibit 31 Revised General Arrangement, dated June 11, 2010, and docketed on July 13, 2010.

Email from Rice Solar Energy, LLC Regarding Description of Exhibit 42 Heliostat Power & Control Cables, dated August 18, 2010, and docketed September 7, 2010.

#### V. Opinion and Conclusions:

We have reviewed the Project Description section of the SA/DEIS and offer the following to support a Finding of Override.

In addition to the matters already expressed in the AFC, subsequently filed documents and the Staff Assessment, the RSEP project design, function and objectives will serve to meet California's energy needs and bring a multitude of benefits to the State, and public in general, that far outweigh any impacts, whether fully mitigated or not, in the following ways:

- 1) By constructing, operating, and maintaining an efficient, economical, reliable, safe, and environmentally sound solar powered generating facility throughout its useful life to help: (i) achieve the State of California objectives mandated by SB 1078 (California Renewable Portfolio Standard Program); (ii) AB 32 (California Global Warming Solutions Act of 2006); and (iii) other local mandates adopted by the State's municipal electric utilities to meet the requirements for the long-term wholesale purchase of renewable electric energy for distribution to their customers. Operation of the RSEP will displace older, less reliable, gas powered, GHG producing, power plants.
- 2) By furthering the displacement of GHG producing power plants, RSEP has the distinction and <u>unique ability to store energy for delivery of electric power to</u> the grid **after** the sun goes down.
- 3) By developing a site with an excellent solar resource with typical annual average direct normal insolation (DNI) of 7.10 kW per square meter per day.
- 4) By developing a site with close proximity to transmission infrastructure, thereby minimizing environmental impacts.
- 5) By developing a new utility-scale solar energy project using an already proven solar technology.
- 6) By developing a site using minimal amount of water resources for operation while still optimizing power generation and efficiency.
- 7) By developing and designing the Rice Solar Energy Project to conform to the requirements of SolarReserve's long term Power Purchase Agreement (PPA).
- 8) Assist the Western Electric grid meet its current 10 year goals and the anticipated future renewable needs
- Assisting the California Independent System Operator (CAISO) in meeting its strategic goals for the integration of renewable resources, as listed in its Five-Year Strategic Plan for 2008 to 2012.
- 10) By helping to meet the need for additional energy supply, a need based on the steadily growing demand of the California energy market as we approach the

- State deadlines for incorporation of renewable energy sources
- 11) By contributing to reductions in GHG emission from both a State and a regional perspective. Specifically, the RSEP is expected to generate on average approximately 450,000 megawatt-hours (MWh) per year and will displace the use of approximately 5.51 billion cubic feet of natural gas per year typically used by modern high-efficiency natural gas-fired power plants, and reduce the emissions of greenhouse gases by approximately 176,850 metric tons in carbon dioxide equivalent (CO2e) per year, when compared to a high-efficiency natural gas plant.
- 12) By locating the Project in an area with excellent solar direct normal insolation, on a private site with sufficient contiguous acreage to build a 150 MW facility that is near existing transmission lines, and has favorable site topography for ease of access and operation
- 13) By selecting the project site, project configuration and employing advanced technology to meet the criteria and objectives expressed above for the benefit of the people of the State of California, which include:
  - a) Dispatchable sustained peak energy output at 150MW to meet peak energy demand using highly efficient solar energy collection and storage technology;
  - Efficient delivery of sustained peak power output without the burden of intermittency to the transmission interconnection system, ensuring both RSEP's economic viability and lower costs to the consumer;
  - c) Selection of previously disturbed land with existing slope to enable the most efficient use of the land for maximum energy output;
  - d) Minimized cost and potential environmental impacts by locating the RSEP close to an existing transmission system; and

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

- I, Doug Davy, declare as follows:
  - 1. I am presently employed by CH2M HILL, as a Program Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - The attached testimony relating to Alternatives for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Doug Davy

### II. Purpose:

My testimony addresses the subject of Alternatives associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Doug Davy**: I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Alternatives section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

## IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

**Application for Certification Volumes I and II,** dated October 2009, and docketed on October 21, 2009, Section 6.0.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 36 through 43.

Exhibit 8 Rice Solar Energy, LLC's Response to CEC Workshop Queries 9 & 10, dated April 2010 and docketed on April 7, 2010.

Exhibit 23 Rice Solar Energy, LLC's Response to CEC Staff Workshop Query 13, dated June 2010, and docketed on June 14, 2010.

## V. Opinion and Conclusions:

I have reviewed the Alternatives section of the SA/DEIS and agree that the Project will not result in significant impacts and will comply with all applicable laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Jerry Salamy

I, Jerry Salamy, declare as follows:

- 1. I am presently employed by CH2M HILL, as a Principal Project Manager.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- The attached testimony relating to Air Quality for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Jerry Salamy

I. Name(s): Jerry Salamy

## II. <u>Purpose</u>:

My testimony addresses the subject of Air Quality associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

I am presently employed at CH2M HILL and have been for the past 12 years and am presently a Principal Project Manager with that organization. I have a Bachelor's Degree in Chemistry and I have over 23 years of experience in the field of air quality. I prepared or assisted in the preparation of the Air Quality section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

## IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

- Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.1, Appendix 5.1A-E
- Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 1 through 35.
- Exhibit 6 Rice Solar Energy, LLC's Application for Authority to Construct General Form, dated March 15, 2010, and docketed on March 26, 2010.
- Exhibit 10 Rice Solar Energy, LLC's Response to CEC Staff Workshop Queries 1 3, dated April 2010, and docketed on April 19, 2010.
- Exhibit 11 Rice Solar Energy, LLC's Application for Authority to Construct & Permit to Operate, dated April 21, 2010 and docketed on April 21, 2010.

- Rice Solar Energy, LLC's Application for Authority to Construct Wet Surface Air Cooler, dated May 7, 2010, and docketed on May 7, 2010.
- Exhibit 24 **Mojave Desert Air Quality Management District's Preliminary Determination of Compliance**, dated June 10, 2010, and docketed on June 15, 2010.
- Exhibit 27 Rice Solar Energy, LLC's Supplemental Information Item 2 (Materials for Air Quality & Public Health), dated June 2010, and docketed June 17, 2010.
- Exhibit 33 Rice Solar Energy, LLC's Comments on the Preliminary Determination of Compliance, dated July 15, 2010, and docketed on July 19, 2010.
- Exhibit 39 Mojave Desert Air Quality Management District's Final Determination of Compliance, dated July 30, 2010, and docketed on August 5, 2010.

## V. Opinion and Conclusions:

I have reviewed the Air Quality section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in significant impacts to Air Quality and will comply with all applicable Air Quality laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

- I, Doug Davy, declare as follows:
  - 1. I am presently employed by CH2M HILL, as a Program Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. The attached testimony relating to Hazardous Materials for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - I prepared the attached testimony relating to Hazardous Materials for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Orig	inal sigr	ied	
So	cott K	aminski		 

I. Name(s): Doug Davy and Scott Kaminski

### II. Purpose:

Our testimony addresses the subject of Hazardous Materials associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Doug Davy**: I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Hazardous Materials section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Hazardous Materials section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

- Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.5.
- Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.
- Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests

  1 to 168, dated March 2010, and docketed March 9, 2010,
  Responses 89 through 93.
- Exhibit 26 Rice Solar Energy, LLC's Supplementary Informational Item 1, dated June 16, 2010, and docketed on June 16, 2010.

## V. Opinion and Conclusions:

We have reviewed the Hazardous Materials section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in significant impacts and will comply with all applicable Hazardous Materials-related laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF BOB ANDERS

- I, Bob Anders, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Engineer and Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Land Use for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-original signed		
Bob Anders		

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF DEBBIE BUILDER

- I, Debbie Builder, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Development Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Land Use for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original signed	
De	ebbie Builder	_

I. Name(s): Bob Anders and Debbie Builder

### II. Purpose:

Our testimony addresses the subject of Land Use associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Bob Anders**: I am presently employed at WorleyParsons, and have been for the past 2 years and am presently a Sr. Civil Engineer/Project manager with that organization. I have an Engineering Degree in Civil Engineering and I have over 25 years of experience in the field of Civil Engineering. I prepared or assisted in the preparation of the Land Use section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Debbie Builder**: I am presently employed at Worley Parsons and have been for the past 2 years and am presently a Senior Development Manager with that organization. I have a Master of Science Degree in Environmental Studies and I have over 10 years of experience in the field of Land Use. I prepared or assisted in the preparation of the Land Use Assessment for the Rice Solar Energy Project. A detailed description of my qualifications is contained in the attached resume.

## IV. <u>Exhibits:</u>

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.6.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 94 through 99.

Exhibit 13 Riverside County Planning Department Consistency Letter, and docketed on April 27, 2010.

Exhibit 34 Rice Solar Energy, LLC's Proposed Conditions: Land Use & Worker Safety, dated July 16, 2010, and docketed on July 19, 2010.

## V. Opinion and Conclusions:

We have reviewed the Land Use section of the SA/DEIS and agree that with the incorporation of the Conditions of Certification, this Project will not result in any significant Land Use impacts and the RSEP will comply with all applicable Land Use laws, ordinances, regulations and standards (LORS). While Staff has found that the RSEP does not comply with some of the Riverside County General Plan Policies due to significant visual impacts, Staff and RSE agree that a finding of override for Visual Resources will address any impact/inconsistency expressed by Staff in its Land Use assessment. The factual basis for such a finding is included in RSE's Project Description Testimony.

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

DECLARATION OF

Doug Davy

- I, Doug Davy, declare as follows:
  - 1. I am presently employed by CH2M HILL, as a Program Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - The attached testimony relating to Noise and Vibration for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Doug Davy

### II. Purpose:

My testimony addresses the subject of Noise and Vibration associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Doug Davy:** I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Noise and Vibration section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

## IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.7.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

#### V. Opinion and Conclusions:

I have reviewed the Noise and Vibration section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in significant Noise and Vibration impacts and will comply with all applicable Noise and Vibration laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

I, Doug Davy, declare as follows:

- 1. I am presently employed by CH2M HILL, as a Program Manager.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- The attached testimony relating to Public Health for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Doug Davy

### II. Purpose:

My testimony addresses the subject of Public Health associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Doug Davy:** I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Public Health section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

## IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.9.

Exhibit 27 Rice Solar Energy, LLC's Supplemental Information Item 2 (Materials for Air Quality & Public Health), dated June 2010, and docketed June 17, 2010.

#### V. Opinion and Conclusions:

I have reviewed the Public Health section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in significant Public Health impacts and will comply with all applicable Public Health laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

I, Doug Davy, declare as follows:

- 1. I am presently employed by CH2M HILL, as a Program Manager.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- The attached testimony relating to Socioeconomics and Environmental Justice for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Doug Davy

#### II. Purpose:

My testimony addresses the subject of Socioeconomics and Environmental Justice associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

## III. Qualifications:

**Doug Davy**: I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Socioeconomics and Environmental Justice section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

### IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.10, Appendix 5.10A-B.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 108 through 109.

## V. Opinion and Conclusions:

I have reviewed the Socioeconomics and Environmental Justice section of the Staff Assessment and agree that no Conditions of Certification are needed as the Project will not result in significant impacts and will comply with all laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF BOB ANDERS

- I, Bob Anders, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Engineer and Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Soil and Water Resources for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-original signed	
Bob Anders	

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	<b>DECLARATION OF</b> MIKE TIETZE

- I, Mike Tietze, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Hydrogeologist and Location Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Soil and Water Resources for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

- Original signed	d
Mike Tietze	

I. Name(s): Bob Anders and Mike Tietze

### II. Purpose:

We testimony addresses the subject of Soil and Water associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Bob Anders**: I am presently employed at WorleyParsons, and have been for the past 2 years and am presently a Sr. Civil Engineer/Project manager with that organization. I have an Engineering Degree in Civil Engineering and I have over 25 years of experience in the field of Civil Engineering. I prepared or assisted in the preparation of the Soil and Water section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Michael Tietze:** I am presently employed at WorleyParsons, and have been for the past five years and am presently a Senior Hydrogeologist and Location Manager with that organization. I have a Bachelors of Science Degree in Geology and I have over 25 years of experience in the fields of hydrogeology and engineering geology. I prepared or assisted in the preparation of the Soil and Water section and the Geology and Paleontology section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the resume attached to my Opening testimony.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

- Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Sections 5.11 & 5.15, Appendix 5.11A & 5.15A-D.
- Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.
- Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to Exhibit 4 168, dated March 2010, and docketed March 9, 2010, Responses 110 through 146.
- Exhibit 5 Response to CEC Staff Water Resources

  Exhibit 5 Data Requests 130, 139 141, 143 144, dated March 2010 and docketed on March 16, 2010.

Rice Solar Energy, LLC's Response to CEC Staff Workshop Queries
Exhibit 9 4, 6 - 8 & 11, dated April 2010, and docketed on April 12, 2010,
Responses 8 & 11.

Rice Solar Energy, LLC's Response to CEC Staff Biological Exhibit
Resources, Data Requests 49-51, 54, 56, 58, 75 & Response to CEC Staff Soil & Water Resources Data Request 121, dated April 2010 and docketed on April 27, 2010, Response 121.

Exhibit Rice Solar Energy, LLC's Response to CEC Staff Workshop Query 14 12, dated April 2010, and docketed on April 29, 2010.

Exhibit 21 Email from U.S. Army Corps of Engineers to the U.S. Environmental Protection Agency Documenting Non-Jurisdictional Status of RSEP, dated May 27, 2010, and docketed on June 9, 2010.

Exhibit 38 Letter from U.S. Army Corps of Engineers to Sycamore Environmental Consultants, Inc., dated July 27, 2010 and docketed on August 2, 2010.

### V. Opinion and Conclusions:

We have reviewed the Soil and Water Resources section of the SA/DEIS and although we disagree with some of staff's assumptions regarding groundwater recharge and vertical flow, we agree that with incorporation of the Conditions of Certification, the Project will not result in significant Soil and Water impacts and will comply with all applicable Soil and Water Resource laws, ordinances, regulations and standards (LORS).

# Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF CHARLES DIEP

## I, CHARLES DIEP, declare as follows:

- 1. I am presently employed by SolarReserve, as a Senior Project Engineer.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- I prepared the attached testimony relating to Traffic and Transportation for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original sigr	ned	
Ch	arles Diep		 

# Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

- I, Doug Davy, declare as follows:
  - 1. I am presently employed by CH2M HILL, as a Program Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - The attached testimony relating to Traffic and Transportation for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Charles Diep and Doug Davy

### II. Purpose:

Our testimony addresses the subject of Traffic and Transportation associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Charles Diep:** I am presently employed at SolarReserve, and have been for the past 20 months and am presently a Senior Project Engineer with that organization. I have a Bachelor of Science Degree in Chemical Engineering, I am a California registered Professional Engineer in mechanical engineering, and I have over 20 years of experience in the field of environmental engineering. I prepared or assisted in the preparation of the Traffic and Transportation section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Doug Davy**: I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Traffic and Transportation section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

Exhibit 1

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

LAHIDICH	2009, and docketed on October 21, 2009, Section 5.12.	
Exhibit 3	<b>Plan of Development Completion Letter</b> , dated February 9, 2010, and docketed on February 18, 2010.	
Exhibit 4	Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 147 through 153.	

Application for Certification Volumes I and II. dated October

Exhibit 25 Rice Solar Energy, LLC's Project Letter Re: Federal Aviation Administration Process, dated June 10, 2010 and docketed on June 15, 2010.

## V. Opinion and Conclusions:

We have reviewed the Traffic and Transportation section of the SA/DEIS and with minor modifications to the Conditions of Certification, the Project will not result in any significant Traffic and Transportation impacts and will comply with all applicable Traffic and Transportation laws, ordinances, regulations and standards (LORS).

**Pages 6.10-55 through 6.10-57** (due to the agreed upon formatting and verbiage changes as a result of the workshops, <u>TRANS-6 and TRANS-7 should be substituted</u> <u>with the following versions</u>)

#### **Heliostat Positioning Plan**

**TRANS-6**—The project owner shall prepare a Heliostat Positioning Plan in coordination with the Avian Protection Plan specified in Condition of Certification **BIO-25** that would minimize potential for human health and safety hazards and bird injury or mortality from solar radiation exposure.

<u>Verification</u>: Within 90 days before RSEP commercial operation, the project owner shall submit a Heliostat Positioning Plan (HPP) to the CPM for review and approval. The project owner shall also submit the plan to potentially interested parties that may include CalTrans, CHP, FAA, and the Department of Defense (DOD) Southwest Renewable Energy Work Group for review and comment and forward any comments received to the CPM. The Heliostat Positioning Plan shall accomplish the following:

- 1. Identify the heliostat movements and positions (including reasonably possible malfunctions) that could result in potential exposure of observers at various locations including in aircraft, motorists, pedestrians and hikers in nearby wilderness areas to reflected solar radiation from heliostats;
- Describe within the HPP how programmed heliostat operation would address potential human health and safety hazards at locations of observers, and would limit or avoid potential for harm to birds;
- 3. Prepare a monitoring plan that would: a) obtain field measurements in candela per meters squared and watts per meter squared to validate that the Heliostat Positioning Plan would avoid potential for human health and safety hazards consistent with the methodologies detailed in the 2010 Sandia Lab document presented by Clifford Ho, et al<sup>1</sup>, and b) provide requirements and procedures to document, investigate and resolve legitimate human health and safety hazard complaints prioritizing localized

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<sup>&</sup>lt;sup>1</sup> C.K. Ho, C.M. Ghanbari, and R.B. Diver, 2010, Methodology to Assess Potential Glare Hazards from Concentrating Solar Power Plants: Analytical Models and Experimental Validation, ES2010-90053, in proceedings of the ASME 2010 4th International Conference on Energy Sustainability, Phoenix, AZ, May 17-22, 2010.

- response (e.g screening at location of complaint) regarding daytime intrusive light.
- 4. The monitoring plan should be made available to interested parties that may include CalTrans, CHP, FAA, and the Department of Defense (DOD) Southwest Renewable Energy Work Group and be updated on an annual basis for the first 5 years, and at 2-year intervals thereafter for the life of the project.

## <u>Power Tower Luminance Measurement, Validation and Recordkeeping (LMVR)</u> Plan

**TRANS-7** The project owner shall prepare a Power Tower LMVR Plan to provide procedures to conduct measurements and to document complaints regarding distraction effects to aviation, vehicular and pedestrian traffic associated with the RSEP solar receiver tower.

<u>Verification</u>: No later than 60 days prior to RSEP commercial operation, the project owner shall provide a Power Tower LMVR Plan applicable to RSEP for review and approval by the CPM. The plan shall specify procedures to document and investigate complaints regarding intrusive light, and report these to the CPM within 10 days of receiving a complaint.

The project owner shall measure the intensity of the luminance of light in candelas per meter squared and watts per meter squared reflected from the solar receiver tower according to the following:

- A. Within 90 days following commercial operation;
- B. If a major design change is implemented that results in an increase of the reflective luminance of the RSEP solar receiver tower; and
- C. After receiving a complaint regarding a distraction associated with the central solar receiver from a location where previous measurements were not taken.

The Power Tower LMVR Plan shall include provisions for the following:

- Provide measurement data within 30 days to potentially interested parties that may include CalTrans, CHP, FAA, and the Department of Defense (DOD) Southwest Renewable Energy Work Group for review and comment, and to the CPM for review and approval.
- 2. Measurement of luminance at the locations where any distraction effects have been reported and at the locations nearest the solar receiver tower from the four sides of the power plant boundary, and the nearest public road, which may be substituted for one of the sides of the solar receiver tower during the time of day when values would be highest;
- Measurement of luminance using an illuminance meter, photometer, or similar device and reporting of data in photometric units (candelas per meter squared

and watts per meter squared); the measurements are intended to provide a relative and quantifiable measure of luminance that can be associated with any observed and reported distraction effect from the solar receiver tower.

Provisions for documenting reported distraction and if the solar receiver tower is identified as a safety concern; the project owner shall consider reasonable localized mitigation measures that are technically and financially feasible. The localized mitigation measures may include signage for or screening of the affected area or other reasonable measures

4. Post-mitigation verification; Within 30 days following the implementation of mitigation measures designed to reduce localized impact of the solar receiver tower, the project owner shall repeat the luminance measurements to demonstrate the effectiveness of mitigation measures and provide the new measurement data for review and comment by interested parties that may include CalTrans, CHP, FAA, and the Department of Defense (DOD) Southwest Renewable Energy Work Group, and for review and approval by the CPM.

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Transmission Line Safety and Nuisance for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

- Ori	ginal signed	
Scott K	aminski	 

I. Name(s): Scott Kaminski

#### II. Purpose:

My testimony addresses the subject of Transmission Line Safety and Nuisance associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Transmission Line Safety and Nuisance section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 3.3.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

#### V. Opinion and Conclusions:

I have reviewed the Transmission Line Safety and Nuisance section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in any significant impacts and will comply with all Transmission Line Safety and Nuisance laws, ordinances, regulations and standards (LORS).

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF CHARLES DIEP

#### I, CHARLES DIEP, declare as follows:

- 1. I am presently employed by SolarReserve, as a Senior Project Engineer.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- I prepared the attached testimony relating to Visual Resources for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original sigr	ned	
Ch	narles Diep		

## Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

- I, Doug Davy, declare as follows:
  - 1. I am presently employed by CH2M HILL, as a Program Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. The attached testimony relating to Visual Resources for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF TOM PRIESTLEY

- I, Tom Priestley, declare as follows:
  - 1. I am presently employed by CH2MHill, as an Environmental Planner, specializing in visual assessment.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Visual Resources for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original signed
To	om Priestley
	om i needely

I. Name(s): Charles Diep, Doug Davy and Tom Priestley

#### II. Purpose:

Our testimony addresses the subject of Visual Resources associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Charles Diep:** I am presently employed at SolarReserve, and have been for the past 20 months and am presently a Senior Project Engineer with that organization. I have a Bachelor of Science Degree in Chemical Engineering, I am a California registered Professional Engineer in mechanical engineering, and I have over 20 years of experience in the field of environmental engineering. I prepared or assisted in the preparation of the Visual Resources section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Doug Davy**: I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Visual Resources section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Tom Priestley:** I am presently employed at CH2M HILL and am presently an Environmental Planner with that organization. I have a Ph.D. in Environmental Planning and I have over 30 years of experience in environmental planning, specializing in visual assessment. I prepared or assisted in the preparation of the Visual Resources section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.13.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 156 through 158.

#### V. Opinion and Conclusions:

Staff has found that the RSEP will have significant unmitigatable visual resource impacts and we understand they will be recommending a finding of override. The factual basis for such a finding is provided in RSE's Project Description Opening Testimony. Also, two minor modifications have been proposed to Staff by RSE at the most recent workshops with VIS-1 outstanding, but VIS-3 accepted, as follows:

- VIS-1 The project owner shall treat all non-mirror surfaces of the outermost row or rows (as needed) of heliostats in the northern 180-degree circumference of the mirror field; and all other project structures and buildings visible to the public such that:
  - a) their colors minimize visual intrusion and contrast by blending with their existing visual background: in the case of lower buildings and structures, bajadas and mountain slopes as seen from the highway; in the case of foreground generation tie line towers, the valley floor; in the case of the solar tower, the sky by un-pigmented natural concrete color;
  - b) colors and finishes of all components, including mirror support structures, tie line poles and conductors, do not create glare or specular reflection; and c) their colors and finishes are consistent with local policies and ordinances. The generation tie line conductors and arms shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive. This measure shall include coloring of security fencing with vinyl or other non-reflective coating to blend visually to the greatest feasible extent with the background soil.
  - .... (remainder of condition unchanged)
- VIS-3 To address potential impacts to motorists on SR 62 during and after the period of project construction, all construction laydown, administration, parking and other construction-related facilities shall be setback from SR-62 a minimum of 250 100 feet, or greater where feasible. The soil surface and vegetation of the set-back area south of the highway shall remain undisturbed to the maximum extent feasible, except to accommodate the minimum practical number of access drive-ways, or to enhance existing native vegetation. All construction-related areas shall be screened from the highway by 8'-tall opaque screening of tan or brown color to blend with the surrounding soil surface to the extent feasible.

. . . .

**Verification:** At least 90 days prior to start of construction, the project owner shall present to BLM's Authorized Officer and the CPM a revised staging area site plan including a set-back from SR-62 of at least 250 100 feet. If the CPM...

.... (remainder of condition unchanged)

## Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF** 

Doug Davy

- I, Doug Davy, declare as follows:
  - 1. I am presently employed by CH2M HILL, as a Program Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - The attached testimony relating to Waste Management for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Doug Davy

#### II. Purpose:

My testimony addresses the subject of Waste Management associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Waste Management section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 5.14, Appendix 5.14A-B.

Exhibit 2 Rice Solar Energy, LLC's Data Adequacy Supplement, dated November 2009, and docketed on November 20, 2009, Response 6.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

Exhibit 4 Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 to 168, dated March 2010, and docketed March 9, 2010, Responses 159 through 168.

#### V. Opinion and Conclusions:

I have reviewed the Waste Management section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in significant impacts and will comply with all applicable Waste Management -related laws, ordinances, regulations and standards (LORS).

## Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

**DECLARATION OF**Doug Davy

I, Doug Davy, declare as follows:

- 1. I am presently employed by CH2M HILL, as a Program Manager.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- The attached testimony relating to Geologic and Paleontological Resources for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10) was prepared under my direction.
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Doug Davy

I. Name(s): Doug Davy

#### II. Purpose:

My testimony addresses the subject of Paleontological and Geological Resources associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Doug Davy:** I am presently employed at CH2M HILL and have been for the past 6 years and am presently a Program Manager with that organization. I have a PhD in Archaeology and I have over 24 years of experience in the field of regulatory compliance and project management support for infrastructure development projects. I prepared or assisted in the preparation of the Paleontological and Geological Resources section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Sections 5.4 & 5.8, Appendix 5.8A.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

#### V. Opinion and Conclusions:

I have reviewed the Paleontological and Geological Resources section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, the Project will not result in significant Paleontological and Geological impacts and will comply with all applicable Paleontological and Geological Resource laws, ordinances, regulations and standards (LORS).

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF BOB ANDERS

- I, Bob Anders, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Engineer and Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Facility Design for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-original signed		
Bob Anders		

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF CHARLES DIEP

#### I, CHARLES DIEP, declare as follows:

- 1. I am presently employed by SolarReserve, as a Senior project Engineer.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- 3. I prepared the attached testimony relating to Facility Design for the Genesis Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original sig	ned	
Ch	arles Diep		

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - I prepared the attached testimony relating to Facility Design for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original signe	d	
So	cott Kaminski		

I. Name(s): Bob Anders, Charles Diep and Scott Kaminski

#### II. Purpose:

Our testimony addresses the subject of Facility Design associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Bob Anders**: I am presently employed at WorleyParsons, and have been for the past 2 years and am presently a Sr. Civil Engineer/Project manager with that organization. I have an Engineering Degree in Civil Engineering and I have over 25 years of experience in the field of Civil Engineering. I prepared or assisted in the preparation of the Facility Design section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Charles Diep:** I am presently employed at SolarReserve, and have been for the past 20 months and am presently a Senior Project Engineer with that organization. I have a Bachelor of Science Degree in Chemical Engineering, I am a California registered Professional Engineer in mechanical engineering, and I have over 20 years of experience in the field of environmental engineering. I prepared or assisted in the preparation of the Facility Design section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Facility Design section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 2.2.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

#### V. Opinion and Conclusions:

We have reviewed the Facility Design section of the SA/DEIS and agree that with incorporation of the standard Conditions of Certification, the Project will not result in any significant impacts and will comply with all applicable Facility Design-related laws, ordinances, regulations and standards (LORS).

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF BOB ANDERS

- I, Bob Anders, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Engineer and Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Power Plant Efficiency for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-original signed		
Bob Anders		

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - I prepared the attached testimony relating to Power Plant Efficiency for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	C	)rig	inal	sig	nec	ł			
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## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF CHARLES DIEP

#### I, CHARLES DIEP, declare as follows:

- 1. I am presently employed by SolarReserve, as a Senior Project Engineer.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- 3. I prepared the attached testimony relating to Power Plant Efficiency for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original signed
С	harles Diep

I. Name(s): Bob Anders, Scott Kaminski and Charles Diep

#### II. Purpose:

Our testimony addresses the subject of Power Plant Efficiency associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Bob Anders**: I am presently employed at WorleyParsons, and have been for the past 2 years and am presently a Sr. Civil Engineer/Project manager with that organization. I have an Engineering Degree in Civil Engineering and I have over 25 years of experience in the field of Civil Engineering. I prepared or assisted in the preparation of the Power Plant Efficiency section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Power Plant Efficiency section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Charles Diep:** I am presently employed at SolarReserve, and have been for the past 20 months and am presently a Senior Project Engineer with that organization. I have a Bachelor of Science Degree in Chemical Engineering, I am a California registered Professional Engineer in mechanical engineering, and I have over 20 years of experience in the field of environmental engineering. I prepared or assisted in the preparation of the Power Plant Efficiency section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

Exhibit 1 Application for Certification Volumes I and II, dated October 2009, and docketed on October 21, 2009, Section 2.

Exhibit 2 Rice Solar Energy, LLC's Data Adequacy Supplement, dated November 2009, and docketed on November 20, 2009, Response 1.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

#### V. <u>Opinion and Conclusions:</u>

We have reviewed the Power Plant Efficiency section of the SA/DEIS and agree with the conclusions that the RSEP will be an efficient source of renewable energy.

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF BOB ANDERS

- I, Bob Anders, declare as follows:
  - 1. I am presently employed by Worley Parsons, as a Senior Engineer and Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Power Plant Reliability for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-original signed		
Bob Anders	 	

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Power Plant Reliability for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original signed
Sc	cott Kaminski

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF CHARLES DIEP

#### I, CHARLES DIEP, declare as follows:

- 1. I am presently employed by SolarReserve, as a Senior Project Engineer.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- 3. I prepared the attached testimony relating to Power Plant Reliability for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original sigi	ned	
Cł	narles Diep		

I. Name(s): Bob Anders, Scott Kaminski and Charles Diep

#### II. Purpose:

Our testimony addresses the subject of Power Plant Reliability associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Bob Anders**: I am presently employed at WorleyParsons, and have been for the past 2 years and am presently a Sr. Civil Engineer/Project manager with that organization. I have an Engineering Degree in Civil Engineering and I have over 25 years of experience in the field of Civil Engineering. I prepared or assisted in the preparation of the Power Plant Reliability section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Power Plant Reliability section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

**Charles Diep:** I am presently employed at SolarReserve, and have been for the past 20 months and am presently a Senior Project Engineer with that organization. I have a Bachelor of Science Degree in Chemical Engineering, I am a California registered Professional Engineer in mechanical engineering, and I have over 20 years of experience in the field of environmental engineering. I prepared or assisted in the preparation of the Power Plant Reliability section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

**Application for Certification Volumes I and II,** dated October 2009, and docketed on October 21, 2009, Section 2.3.2.

Exhibit 3 Plan of Development Completion Letter, dated February 9, 2010, and docketed on February 18, 2010.

#### V. Opinion and Conclusions:

We have reviewed the Power Plant Reliability section of the SA/DEIS and agree with the conclusions that the RSEP will be a reliable source of renewable energy.

## Energy Resources Conservation and Development Commission

In the Matter of:	DOCKET NO. 09-AFC-10
Application For Certification for the RICE SOLAR ENERGY PROJECT	DECLARATION OF SCOTT KAMINSKI

- I, Scott Kaminski, declare as follows:
  - 1. I am presently employed by SolarReserve, as a Project Manager.
  - 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
  - 3. I prepared the attached testimony relating to Transmission System Engineering for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
  - 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
  - 5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

-	Original signed
So	cott Kaminski

I. Name(s): Scott Kaminski

#### II. Purpose:

My testimony addresses the subject of Transmission System Engineering associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Scott Kaminski**: I am presently employed at SolarReserve, and have been for the past 1.5 years and am presently a Project Manager with that organization. I have a Bachelor's Degree in Human Resources Management and I have over 25 years of experience in power plant operations, maintenance, construction, commissioning, engineering, design, procurement, and project management. I prepared or assisted in the preparation of the Transmission System Engineering section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Application for Certification Volumes I and II, dated October 2009, Exhibit 1 and docketed on October 21, 2009, Section 3.0, Appendix 3A-3B. Plan of Development Completion Letter, dated February 9, 2010, Exhibit 3 and docketed on February 18, 2010. Rice Solar Energy, LLC's Data Adequacy Supplement, dated Exhibit 2 November 2009, and docketed on November 20, 2009, Responses 2 through 5. Rice Solar Energy, LLC's Response to CEC Staff Data Requests 1 Exhibit 4 to 168, dated March 2010, and docketed March 9, 2010, Responses 154 through 155. Rice Solar Energy, LLC's System Impact Report, dated May 14, Exhibit 22 2010, and docketed on June 14, 2010. Rice Solar Energy, LLC's Response to CEC Staff Workshop Exhibit 23 Query 13, dated June 2010, and docketed on June 14, 2010.

Exhibit 44 Rice Solar Energy, LLC's Full Load Rejection Stability Plots, dated July 16, 2010, and docketed on October 12, 2010.

Exhibit 45 Rice Solar Energy, LLC's Responses to Supplemental Data Requests, dated August 6, 2010, and docketed on October 12, 2010.

#### V. Opinion and Conclusions:

I have reviewed the Transmission System Engineering section of the SA/DEIS and agree that with incorporation of the Conditions of Certification, including the minor changes to TSE-5 and the related analysis that has been agreed to by Staff, the Project will not result in any significant impacts and will comply with all Transmission System Engineering laws, ordinances, regulations and standards (LORS).

As agreed to by Staff in the October 11 workshop, RSE proposes to delete one subsection of TSE-5 and modify the related portions of the assessment. All other segments of the analysis and conditions remain the same.

#### Global Changes:

- 1. All references to the "supplementary studies" and "supplementary SIS reports" are to be replaced with "supplementary report".
- 2. All references to Western's Parker-Davis transmission system that are designated as only "Parker" or are abbreviated with "P-D" are to be replaced by "Parker-Davis"
- 3. Due to the agreed upon deletion of sub-part "i" of "TSE-5 f)", all references to the sub-parts of TSE-5, subsection "f" need to be moved up one digit respectively. For example: TSE-5 f) ii, becomes TSE-5 f) ii; TSE-5 f) iii, becomes TSE-5 f) ii; and so on.

#### Specific Changes:

#### Page 7.4-6, Last Paragraph

The May 14, 2010 SIS was prepared by the Western to evaluate the system impacts of the proposed RSEP on the Western transmission system in the DSW region and was supplemented by additional studies and information (diagrams) dated July 16, 2010 and August 9, 2010 conducted by the Utility System Efficiencies, Inc. (a consulting firm)

with the Western base cases <u>in coordination with Western</u>. The Western SIS was prepared with and without the RSEP 150 ....

#### Page 7.4-7, First Full Paragraph

In the base cases generation added from the interconnection queue was balanced by reducing fossil fuel generation in Los Angeles area. The existing 520 MW Blythe generating plant (modeled with only 319 MW generation output in the heavy summer case and 509 MW in the heavy winter case) interconnection was shown switched over from the Western system to the California ISO grid at the Julian Hinds 230 kV substation. In each of the studies, it is expected that generation and critical seasonal power flows were maintained within their limits. It is expected that Tthe base cases included funded & planned transmission.....

#### Page 7.4-10, First Paragraph (delete entire paragraph)

The additional studies provided by Utility System Efficiencies, Inc. dated July 16, 2010 and August 9, 2010 and contributing to these conclusions are pending review and approval by Western. If necessary, these conclusions will be updated following Western's review. Condition of Certification TSE-5, part f) i) would require that the project owner provide evidence that it has received Western's approval of the additional studies performed by Utility System Efficiencies, Inc. dated July 16, 2010 and August 9, 2010, or has updated them and received Western's approval of any subsequent studies that may be necessary.

#### Page 7.4-18, Condition of Certification, TSE-5, subsection f

(In subsection f, delete sub-part "i"; the remainder of condition is unchanged)

**TSE-5** The project owner shall ensure ....

. . . . . . .

- f) The project owner shall provide to the CPM:
  - i) Evidence that the project owner has received Western's approval of the additional power flow studies performed by Utility System Efficiencies, Inc. dated July 16, 2010 and August 9, 2010, including any subsequent studies that may be necessary to satisfy Western;

## Energy Resources Conservation and Development Commission

In the Matter of:

Application For Certification for the RICE SOLAR ENERGY PROJECT

**DOCKET NO. 09-AFC-10** 

DECLARATION OF ANDREA GRENIER

I, Andrea Grenier, declare as follows:

- 1. I am presently employed by Grenier & Associates, Inc., as its Owner and President, providing environmental permitting and compliance services to a variety of renewable and conventional energy developers.
- 2. A copy of my professional qualifications and experience is included herewith (Attachment A to Testimony) and is incorporated by reference in this Declaration.
- 3. I prepared the attached testimony relating to General Conditions and Compliance for the Rice Solar Energy Project (California Energy Commission Docket Number 09-AFC-10).
- 4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
- I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on October 15, 2010.

Andrea Grenier

andrea E. Thenier

I. Name(s): Andrea Grenier

#### II. Purpose:

My testimony addresses the subject of General Conditions and Compliance and Closure conditions associated with the construction and operation of the Rice Solar Energy Project (09-AFC-10).

#### III. Qualifications:

**Andrea Grenier:** I am presently employed at Grenier & Associates, Inc. and have been for the past 13 years and am the principle of that organization. I have a BS in Business Administration and I have over 35 years of experience in the field of regulatory compliance and project management support for infrastructure development projects, including working at the CEC as an analyst from 1975 to 1979. I prepared or assisted in the preparation of all the sections of the AFC, including the review of the General Conditions and Compliance requirements for this project contained in the SA/DEIS, as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

#### IV. Opinion and Conclusions:

I have reviewed the General Conditions, Compliance and Closure section of the SA/DEIS and with incorporation of the Conditions of Certification, the Project will not result in significant impacts and will comply with all applicable laws, ordinances, regulations and standards (LORS).

RSEP requests that the Final Decision incorporate language contained in the Commission Final Decisions for the Blythe Solar Power Project and the Genesis Solar Energy Project relating to the authority of the Compliance Project Manager (CPM). While RSE believes that the CPM already has implied authority to accept and approve a compliance plan for a limited construction activity that may not have all of the detail necessary for construction of the full project activities, RSE requests this authority be expressly contained in the Final Decision and therefore proposes the following language to be added to the description of the CPM's authority.

All project compliance submittals are submitted to the CPM for processing. Where a submittal required by a condition of certification requires CPM approval, the approval will involve all appropriate Energy Commission staff and management. All submittals must include searchable electronic versions (pdf or MS Word files). The CPM may accept and approve compliance submittals that provide sufficient detail to allow construction activities to commence without the submittal containing detailed information on construction activities that will be commenced later in time.

Giving the CPM this express authority would in no way jeopardize compliance with the conditions, and in all circumstances would be up to Compliance Staff discretion. For projects like the RSEP, this flexibility will allow for the orderly synchronization of construction schedule and compliance plan approval.



## BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA 1516 NINTH STREET, SACRAMENTO, CA 95814 1-800-822-6228 – www.energy.ca.gov.

APPLICATION FOR CERTIFICATION
FOR THE RICE SOLAR ENERGY POWER
PLANT PROJECT

#### **APPLICANT**

Jeffrey Benoit
Project Manager
Solar Reserve
2425 Olympic Boulevard, Ste. 500 East
Santa Monica, CA 90404
Jeffrey.Benoit@solarreserve.com

#### **APPLICANT'S CONSULTANTS**

Andrea Grenier
Grenier and Associates
1420 East Roseville Parkway, Ste. 140-377
Roseville, CA 95661
andrea@agrenier.com

Douglas Davy
CH2MHILL
2485 Natomas Park Drive, Ste. 600
Sacramento, CA 95833
ddavy@ch2m.com

#### **COUNSEL FOR APPLICANT**

\*Scott Galati
Marie Mills
Galati & Blek, LLP
455 Capitol Mall, Suite 350
Sacramento, CA 95814
sgalati@gb-llp.com
mmills@gb-llp.com

#### **INTERESTED AGENCIES**

California ISO
E-mail Preferred
.e-recipient@caiso.com.

Docket No. 09-AFC-10

## PROOF OF SERVICE (Revised 8/5/2010)

Liana Reilly Western Area Power Administration PO Box 281213 Lakewood CO 80228-8213 reilly@wapa.gov

Allison Shaffer
Bureau of Land Management
Palm Springs/South Coast Field Office
1201 Bird Center Drive
Palm Springs, Ca 92262
allison\_shaffer@blm.gov

#### <u>INTERVENORS</u>

#### **ENERGY COMMISSION**

ROBERT WEISENMILLER
Commissioner and Presiding Member
weisenm@energy.state.ca.us

KAREN DOUGLAS
Chairman and Associate Member
kldougla@energy.state.ca.us

Kourtney Vaccaro
Hearing Officer
kvaccaro@energy.state.ca.us

John Kessler Siting Project Manager ikessler@energy.state.ca.us

Deborah Dyer Staff Counsel <u>ddyer@energy.state.ca.us</u>

\*Jennifer Jennings Public Adviser's Office *E-mail preferred* <u>publicadviser@energy.state.ca.us</u>

#### **DECLARATION OF SERVICE**

I, Marie Mills, declare that on October 18, 2010, I served and filed copies of the attached, RICE SOLAR ENERGY, LLC'S OPENING TESTIMONY PART 1, dated October 18, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/sitingcases/ricesolar].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

	FOR SERVICE TO ALL OTHER PARTIES:
X	sent electronically to all email addresses on the Proof of Service list;
	by personal delivery;
_X_	by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses <b>NOT</b> marked "email preferred."
AND	authorses not manifed on an protestical
	FOR FILING WITH THE ENERGY COMMISSION:
X	sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address
OR	below (preferred method);
	depositing in the mail an original and 12 paper copies, as follows:
	CALIFORNIA ENERGY COMMISSION Attn: Docket No. <u>09-AFC-10</u> 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Marie Mills

# Attachment A Resumes

# WESLEY A. ALSTON

Community Planning / Entitlement / Environmental Analysis Fire Compliance Analysis / Fire Protection Services

#### **CLIENTS SERVED**

As Principal of Pacific Development Solutions Group (**PDSG**), Wes Alston has been an active participant in the endeavors of many California builders and developers. **PDSG** has provided services to relatively small entrepreneur developers, mid-size development firms, and major landowners.

Alliance Residential Lowes

Andland Properties, LLC Nevis Development Company

Beazer Homes Southern California Pacific Century Homes

Braddock and Logan Associates Pulte Homes

Bren/Osgood Company Rael Development Corporation

Canaday & Company R.C. Hobbs Company

Centex Homes Starbucks

Empire Companies Stoneridge Commercial

Highpoint Communities Suncal
K. Hovnanian Homes Target

KB Homes Taylor Woodrow Homes
Kohl's Trumark Companies
Lincoln Properties William Lyon Companies

#### PROFESSIONAL EXPERIENCE

#### **Riverside County Fire Department**

**July 1971 – December 2002** 

The Riverside County Fire Department provides all risk emergency management to the County of Riverside and 18 contract Cities. Responsible for a \$143 million dollar budget and the supervision and overall management of the Fire department.

#### Fire Chief, City of Moreno Valley

February 2000 – December 2002

Accountable for administering \$6 million budget and maintaining effective cost controls. Managed staff of 150 firefighters and administrative personnel. Coordinated resource exchanges with other California Department of Forestry (CDF) facilities and fire departments. Responsibilities included:

- Fire Stations: Sponsored program to facilitate reducing response time by 5 minutes.
- Equipment Acquisition and Fire Stations: Responsible for submitting RFP's, preparing and reviewing specifications, negotiating contracts, and awarding bids.
- Financial Management: Maintained the lowest per capita cost of cities in California with a population between 100,000 and 200,000.

WESLEY A. ALSTON PAGE 2 OF 3

#### **Battalion Chief/Fire Marshal, City of Moreno Valley**

November 1997 – February 2000

Supervised clerical and engineering staff in preparation of files, records, drafts, and maps pertaining to Fire Protection Planning for the City of Moreno Valley Fire Prevention office. Provided technical assistance to Fire Protection staff, Building and Safety staff, Code Enforcement, Planning staff, and others within the City that requires technical fire protection and planning information. Assisted in development of the Fire Department budget and monitor expenditures within the general Fire Department fund, development fees, and fire mitigation fees. Developed the Fire Department section of the City of Moreno Valley's new General Plan, presented to the City's Planning Commission and received approval. Attended all meetings throughout the City and County requiring the Fire Department representation. Provided a leadership role in all meetings.

#### Fire Captain Specialist

**July 1984 – November 1997** 

Managed the operation of the Fire Protection Planning and Engineering Division. Activities included:

- Participation in committees developing local and state ordinances.
- Serving as representative of the County Fire Department on planning matters before the Riverside County Board of Supervisors and Planning Commission.
- Negotiation of deal terms and purchase agreement conditions with property owners and brokers for new fire stations within the county.
- Preparation of economic and market feasibility analyses for specific plans within the county.

#### Responsibilities included:

- Management of current planning functions including subdivision, boundary adjustment, annexation, covenant modification, variance, and condition change.
- Preparation and presentation of staff reports and recommendations to Design Review Board and Board of Directors.
- Research and preparation of information on application processing, land use, governing documents, and regulatory code questions for staff, decision-makers, the membership, realtors and land-use professionals.
- Special projects in support or furtherance of Association policies and goals.
- Review and analyze regional plans and projects that have local impacts and generally tracking development in adjacent jurisdictions.
- Representing the Association at meetings of other jurisdictional entities.

#### **EDUCATION**

Bachelor of Science in Engineering, 1976 San Diego State

Associate of Arts in Fire Science, 1972 San Diego City College

#### PROFESSIONAL TRAINING AND CERTIFICATIONS

POST Basic POST Supervision NFPA Fire Sprinklers POST Intermediate SFM Fire Investigator 1 NFPA Fire Alarms WESLEY A. ALSTON PAGE 3 OF 3

#### **CURRENT COMMUNITY INVOLVEMENT / PROFESSIONAL AFFILIATIONS**

Board Member Riverside Area Rape Crisis Center Moreno Valley Community Hospital Foundation RCC Community Partnership Moreno Valley Chamber of Commerce National Fire Protection Association California Fire Chiefs Association California Conference of Arson Investigators Board Member United Way of Inland Valleys Riverside Community College Foundation Silver Eagles Building Committee, St. Patrick Church International Conference of Building Officials California League of Cities California Contractor (B2) License No. 81515



# Bob Anders, P.E.

Senior Supervising Civil Engineer/PM Sacramento

Resume

#### SUMMARY

Twenty six + years of experience in civil engineering and construction, including power plant design, renewable energy design and development, project management, land development, infrastructure design, master planning, utility design, site development, and construction management. Performed the duties of the Resident Engineer on several large industrial projects.

#### **EXPERIENCE**

#### 2008 - Present

#### Senior Supervising Civil Engineer/Project Manager, Sacramento, WorleyParsons, Folsom, California

Responsible for the design and development of renewable energy projects including Concentrating Solar (CSP) and Photovoltaic (PV) power projects. CSP include design and development of "power tower" and "trough" projects. Power tower projects in 5 states of the US and two international projects. Trough projects located in 2 states of the US, and PV projects located in 3 states of the US. Additional responsibilities include design of conventional combined cycle power projects and geothermal projects, including civil and structural elements.

#### 2006 - 2008 Project Manager, Newland Communities, Roseville, California

Responsible for the engineering and construction on a large master planned community. Including planning and permit efforts required. Project included trunk sewer and water lines and complex drainage facilities.

#### 2001 - 2006 Senior Civil Engineer and Civil Engineering Manager, Calpine Corporation, Folsom, California

Lead the civil, structural, and design team during the design and construction of multiple cogeneration and combined cycle power projects for Calpine. Was the Resident Engineer on multiple projects, totaling over 1,800 MW. Worked on all phases, including development and permitting, engineering, construction, and operations in support of one of the largest independent power providers in the country.

#### 1998 - 2001 Project Manager, Diamond Creek Partners, Roseville, California

Responsible for the engineering and construction on a large master planned community. Including planning and permit efforts required. Project included trunk sewer and water lines and complex drainage facilities.

#### 1993 - 1998 Engineering Manager, Arctic Slope Regional Corporation, Sacramento, California

Responsible for of all of the engineering and construction projects for the operations in the lower 48 states. Projects included design build and traditional construction for all branches of the Federal Government. Oversaw proposals, including estimates for the work. Includes 6 years contracting with the Federal Government under FAR rules and regulations.

#### 1990 - 1993 Project Manager, RMB Reality, Roseville, California

Responsible for the engineering and construction on a large master planned community. Including planning and permit efforts required. Project included trunk sewer and water lines and complex drainage facilities.

#### 1984 - 1990 Project Manager/Engineer/Estimator, Granite Construction Company, Sacramento, California

002-000-CPF-016 (007848) HRF-0033 Rev 6 (03-Feb-09)

Corporate Base

Page 1



# Bob Anders, P.E.

Senior Supervising Civil Engineer/PM Sacramento

#### Resume

Roles included estimating, project engineer, and project manager of a wide range of heavy civil projects including mass grading, canals, trunk water and sewer lines, treatment facilities, bridges, dams, pumping stations, and infrastructure development.

#### **EDUCATION**

BS (Civil Engineering), University of California, Berkeley, 1984

#### **REGISTRATIONS/AFFILIATIONS**

Registered Professional Engineer - California - License No. C46483

**Eco**Nomics

Page 2





Resume

#### SUMMARY

Ms. Builder has over 10 years experience guiding developers through the regulatory process. Ms. Builder's unique background working directly for a developer as well as a solid consultancy history, offers clients a manager with the ability to see a project from more than one perspective. Client specific services include developing entitlement strategy; due diligence, feasibility analyses; site acquisition; management and writing of CEQA & NEPA compliance documents; regulatory permitting assistance; policy analysis; coordination and relationship building with local, regional, and state governmental agencies; public outreach, consultant management; project scheduling and budget.

#### **EXPERIENCE**

#### 2008- Present Project Manager, WorleyParsons, Sacramento, CA

Focus on progressing early stage commercial renewable energy projects through site selection and federal, state and local regulatory compliance and permitting. Prepared and managed more than thirteen Bureau of Land Management Plans of Development in support of solar power projects on BLM land in California, Nevada, Arizona, New Mexico and Colorado. Provide input to client California Energy Commission (CEC) Applications for Certification (AFC); Environmental Impact Statements (EIS); Environmental Impact Reports (EIR); Nevada Utility Environmental Protection Act (UEPA); and Arizona Certificate of Environmental Compatibility (CEC) documents. Provide liaison role between developers and governmental agencies as well as management of client sub-consultants. Other responsibilities include business development, marketing and staff development.

#### 2008 - 2008 Land Use Analyst, Latham & Watkins, Los Angeles, CA

Processed land use entitlements with local, state and regional governmental agencies, developed and maintained relationships with agency and government personnel; coordinated entitlement activity with other consultants such as civil engineers, environmental and traffic consultants, architects, public relations firms, review and analyze technical reports including California Environmental Quality Act (CEQA) documents, traffic studies, etc; attend public hearings on client matters and other matters of interest to clients; researched the zoning and related issues of subject properties monitor pending legislation.

#### 2005 - 2008 Project Manager, D.R. Horton, Simi Valley, CA

Responsible for various management tasks throughout the complete home building process from due diligence to final construction. Assisted with financial and physical feasibility determination of potential acquisitions. Lead, managed and directed consultants in design and development of entitlement required supporting studies (Environmental Impact Reports (EIR's), Master Plans, Specific Plans,





Resume

General Plan Amendments, Zone Changes, Geotechnical, Fiscal, etc). Coordinated with responsible agencies in processing of entitlements. Processed Tentative Maps to Final Maps. Provided direction to consultants in the completion of construction plans and oversaw the completion, submittal and approval of construction plans. Created and maintained development schedules and budgets. Served as liaison between the development team and various governmental agencies and departments. Assisted with DRE requirements. Served on HOA boards.

- **Estancia**, City of Palmdale Project Manager for the proposed 151 single family detached subdivision with 4 detention basin lots and an offsite regional detention basin. Project included negotiating with four onsite easement holders and obtaining offsite right-of-way easements. Project entitlements included a Final Map.
- Gateway Specific Plan, City of Bakersfield Project Manager for the preparation of full entitlements associated with a 4,000 acre mixed-use master plan community. Proposed were 16,471 dwelling units, 506 acres of mixed-use commercial retail, office, business park and institutional land uses, and 191 acre of open space. Entitlements included a Specific Plan, General Plan Amendment, Pre-Zone and Annexation, Zone Change Cancellation of Williamson Act Contracts, Exclusion from Agricultural Preserves, Environmental Impact Report, and Development Agreement.
- Rancho Victoria, City of Oxnard Project Manager for a 17-acre parcel with 42,000 square feet of general commercial space in six buildings; 105 multi-family residential condominium units and associated parking, roadways recreational facilities, and circulation connections. Project entitlements included a General Plan Amendment, Tentative Map and Major Modification.
- Minami Specific Plan, City of Guadalupe Project Manager for a proposed 323 single family detached and 116 single family attached subdivision with a community park and small commercial center on approximately 87 acres. Project entitlements included a Sphere of Influence Amendment, Specific Plan, General Plan Amendment, Pre-zone and Annexation, Zone Change, Cancellation of Williamson Act Contract and Tentative Map.
- **Mayfaire**, City of Bakersfield Project Manager for a proposed 252 single family detached subdivision with a community park. Project entitlements included a Final Map.

#### 2001 - 2005 Project Manager, Impact Sciences, Camarillo, CA

Reviewed, researched, and analyzed environmental assessment documents and policy analysis reports on complex and comprehensive land use projects. Prepared Initial Studies, Negative Declarations, Mitigated Negative Declarations and Environmental Impact Reports in compliance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). Provided project management, client and outside agency management, budget compliance, and data collection including air and noise monitoring and modeling. Provided input and participated in proposal preparation including project scope and budget and represented the company at selection interviews.

- Blackhawk Land Company/S.V. Investments, Environmental Impact Report, County of Kern Project Manager for the preparation of an EIR analyzing the development of 573 single-family homes on a 197-acre site. Project entitlements included a Specific Plan Amendment, Zone Change, Exclusion from Agricultural Preserve, and Tentative Tract Map.
- Legacy Partners/Woodfin Suites, Environmental Impact Report, County of Los Angeles Project Manager for the preparation of an EIR analyzing the development of 526 residential dwelling units, 161 boat slips and 1,167 parking spaces, a 20-story, 339,241 square foot, tower containing up to 288 hotel and vacation ownership suites, a 97,796 square foot six-level parking structure and a two-acre park. Project entitlements included Coastal Development Permit, Conditional Use Permit, Variance, and Local Coastal Program Amendment.



# Deborah Builder, JD Senior Development Manager

Resume

- Azusa Pacific University, Environmental Impact Report, City of Azusa Project Manager for the preparation of the Specific Plan EIR for construction of over one million square feet of new administrative, academic, student housing, and athletic facilities in addition to parking and circulation improvements on the main campus to accommodate an increase of over 3,000 students for the projected buildout horizon of 2025. Project entitlements included a General Plan Amendment, Zone Change, and Specific Plan.
- Tentative Tracts 54063 and 54064, Environmental Impact Report, City of Hidden Hills Assistant Project Manager - This EIR analyzed the development of 20 single-family homes on 18 acres in the City of Hidden Hills. Project entitlements included a General Plan Amendment, Pre-zone, Tentative Tract Maps, Annexation, and Variance.
- Krieger Child Care Center Expansion, Focused Tiered Environmental Impact Report, University of California Los Angeles - Project Manager, Tiered from the UCLA 2002 Long Range Development Plan Final EIR, this Focused EIR analyzed the potential of the proposed Krieger Child Care Center Expansion Project to adversely impact a sensitive natural community, if any, on the hillside adjacent to the project site.
- Chaffey Community College District, Rancho Cucamonga Campus Master Plan Environmental Impact Report, Chaffey Community College District - Project Manager for the preparation of the Master Plan EIR for construction of new buildings, modification of existing buildings, and improvements to parking and circulation on the Chaffey Community College Rancho Cucamonga campus.
- City of Gardena, Project Manager to the City of Gardena preparing over twenty-five Initial Studies, Staff Reports, Findings, and Mitigation Monitoring Programs for projects located within the City. Many of the projects have been complex and controversial including a drug-rehabilitation facility as well as a casino signage program.
- Tentative Tract Map 52717, Amendment to Specific Plan No. 4 EIR, City of San Dimas Assistant Project Manager for the preparation of an EIR analyzing the impacts of a 19-acre residential community containing 18 proposed homes, equestrian uses, and open space. Entitlements included an amendment to the City of San Dimas' Municipal Code to modify development standards applicable to a portion of Specific Plan Area No. 4
- Newhall Ranch Specific Plan The Landmark Village Project, Los Angeles County Prepared EIR sections for a project proposing 1,444 residential units, up to 1.5 million square feet of non-residential mixed-use space, along with a 7-acre elementary school and public recreational facilities. The project also includes all on-site and off-site infrastructures necessary to support the proposed project, including a domestic water system, sanitary sewer system, and a drainage network. The EIR will also analyze the construction of the Long Canyon Road Bridge across the Santa Clara River.
- Newhall Ranch Specific Plan Mission Village Project, Los Angeles County Prepared EIR sections for a project proposing 5,331 residential units (plus 73 second units), approximately 1,299,000 square feet of nonresidential mixed-use space, a 9-acre elementary school, an 8.3-acre of private recreation center, and a system of landscaped trails and walkways. The project also includes construction of the 1,250 foot long, 117 feet wide Commerce Center Drive Bridge over the Santa Clara River with required abutments and bank stabilization on either side of the bridge as well as bank stabilization elsewhere along the Santa Clara River.
- Encore Hall Senior Apartments, Mitigated Negative Declaration, City of Los Angeles Community Redevelopment Agency, Assistant Project Manager - Prepared analysis of impacts resulting from development of a 106 unit senior housing apartment, 75 underground parking spaces, 6,500 square feet of resident community space, 2,000 square feet of public open space and an approximately 613 space public parking garage in the Hollywood Community of the City of Los Angeles.
- Valencia Boulevard/Soledad Canyon Road Improvements, Mitigated Negative Declaration, City of Santa Clarita - Prepared analysis of impacts resulting from improvements to the Valencia Boulevard and Soledad Canyon Road intersection.
- North Valencia Auto Mall, Mitigated Negative Declaration, City of Santa Clarita Prepared analysis of impacts resulting from the proposed automotive sales development (auto mall) and the environmental effects of

**EcoNomics** 



# Deborah Builder, JD Senior Development Manager

Resume

the additional import of 230,000 cubic yards of soil to the project site.

- Valencia High School, Negative Mitigated Declaration, City of Santa Clarita Prepared analysis of light impacts resulting from the proposed addition of stadium lights to the Valencia High School stadium to adjacent residential uses.
- Centennial Specific Plan, Notice of Preparation, County of Los Angeles Prepared an exhaustive Notice of Preparation for a Specific Plan that proposes a maximum of 23,000 dwelling units and 14 million square feet of non-residential development of employment areas (12,223,390 sq. ft) and retail serving centers (1,986,336 sq. ft.) anticipated to be built over a period of approximately 20 years. One parcel map, three tract maps for subdivision on up to 5,651 units are being currently requested. Two elementary schools, one high school, a golf course, a waste water treatment facility, and a fire station are being proposed in conjunction with the subdivision process. A separate CUP is being requested on existing recreational hunt club for change of boundary as a result of the Specific Plan proposal.

#### Analyst, Neptune Sciences, San Diego, CA 1998 - 2001

Managed an effort to implement wave energy resources along the California coast. Wrote proposals, met with and gave presentations to the California Energy Commission. Congressmen, Senators and energy industry officials as well as coordinated with the State Lands Commission and the Coastal Commission to learn proper permit and approval process. Determined CEQA/NEPA compliance pathways. Responded to Request for Proposals and coordinated contract administration.

#### 1999 - 2000 Legal Assistant, San Diego City Attorney, San Diego, CA

Analyzed legal problems; performed routine legal research; prepared drafts of legal documents, briefs, reports, resolutions and legislative measures; ascertained the last amended form of the statutory law on a given subject; compiled, annotated and indexed provisions of law and of legislative measures; secured information regarding court decisions; assisted in the work of the law library; kept records and indexes of legal cases, prepared and dictated correspondence.

#### **EDUCATION**

JD, Thomas Jefferson, 2000

MS, BS, Ohio University, 1997, 1995

#### REGISTRATIONS/AFFILIATIONS

**Urban Land Institute** 

## SPECIALIST COURSES

Real Estate Development Process Part I&II, Urban Land Institute, January 2006

Developing Master Planned Communities, Urban Land Institute, June 2006

Law of Renewable Energy, EUCI Webinars



# Deborah Builder, JD Senior Development Manager

#### Resume

Tax & Project Finance Structuring Issues for Renewable Energy Projects April 27, 2009
Siting and Permitting for Renewable Energy ProjectsJune 1, 2009
Power Purchase Agreements for Renewable Energy Projects, May 18, 2009
Real Estate and Site Rights for Renewable Energy Projects, May 11, 2009
EPC, Major Component, Construction & Balance of Plant Contracts for Renewable Energy Projects, June 8, 2009
Regulatory and Transmission Issues for Renewable Energy Projects June 15, 2009

Water & Land for Renewable Energy in the Southwest Conference, October 22-23 2009

Renewable Energy Development on Federal Lands Workshop & Conference, March 28-31, 2010

# Douglas Davy, Ph.D.

# **Project Manager**

## **Education**

Ph.D., Archaeology M.A., Anthropology B.A., Anthropology

# Relevant Experience

Dr. Davy has 24 years of experience providing regulatory compliance and project management support for infrastructure development projects. He has served as project manager for numerous environmental licensing and permitting projects, directing multidisciplinary teams of planners, engineers, and scientists in helping to resolve complex environmental regulatory issues. Dr. Davy has served as project manager for 13 Applications for Certification (AFCs) before the California Energy Commission and has also worked on numerous NEPA and CEQA and local permitting projects for energy infrastructure development.

#### Representative Projects

- Project Manager, Rice Solar Energy Project Application for Certification, SolarReserve, LLC, Riverside County, CA. Project Manager for 150 MW concentrating solar energy project featuring a mirror field of 17,500 heliostats, solar receiver tower, and integral thermal storage using a liquefied salt mixture. The project design includes a 1,410-acre project site, air-cooled condenser, steam turbine generator, hot and warm salt storage tanks, and 9.2-mile-long 230 kV transmission line. Directed multidisciplinary team of scientists and engineers in preparing license application and permitting documents for the California Energy Commission, Bureau of Land Management, Western Area Power Administration, US Fish and Wildlife Service, California Department of Fish and Game, and other agencies.
- Project Manager, Oakley Generation Station, Radback Energy, Incorporated, Oakley,
  California. Project manager for AFC before the CEC for a 600-MW natural gas-fired power
  plant. Directed a multidisciplinary team of scientists and engineers in providing project
  development support and preparing application document, responding to data requests, and
  providing expert testimony. Participated in consultations with CEC staff and other
  regulatory agencies.
- Project Manager, CPV Vaca Station, Competitive Power Ventures, Vacaville, California.
   Project manager for AFC before the CEC for a 600-MW natural gas-fired power plant.
   Directed a multidisciplinary team of scientists and engineers in providing project development support and preparing application document, responding to data requests, and providing expert testimony. Participated in consultations with CEC staff and other regulatory agencies.

# Douglas Davy, Ph.D.

- Project Manager, Humboldt Bay Repowering Project AFC, Pacific Gas and Electric Company, Eureka, California. Project manager for AFC before the CEC for the 163-MW natural gas-fired power plant using 10 Wärtsilä 18V50DF dual-fuel turbine-generators. Directed multidisciplinary team of scientists and engineers in preparing testimony for licensing.
- Project Manager, Walnut Creek Energy Park and Sun Valley Energy Center AFCs, Edison Mission Energy, Los Angeles and Riverside Counties, California. Project manager for AFCs before the CEC for two 500 MW natural gas-fired peaking power plants using GE Energy LMS100 technology. Directed multidisciplinary team of scientists and engineers in preparing testimony for licensing.
- Project Manager, Inland Empire Energy Center, Calpine Corporation, Riverside County,
  California. Project manager for AFC before the CEC for the 810-MW natural gas-fired power
  plant. Directed multidisciplinary team of scientists and engineers in preparing testimony for
  licensing. Managed preparation of license amendments, including conversion of the turbine
  technology to the GE Energy S107H System and for a rerouting of the natural gas pipeline.
  Coordinated consultations with CEC staff and other regulatory agencies.
- Project Manager, Russell City Energy Center, Calpine/Bechtel Joint Development, Hayward, California. Project manager for the preparation of an AFC before the CEC for a 600-MW natural gas-fired power plant and appurtenant facilities including natural gas, water supply, and electrical transmission lines. Prepared environmental assessment associated with reconductoring 14 miles of 230 kV transmission line. Project qualified for an expedited 6-month licensing process under the Governor's emergency power plant licensing executive order. Also served as project manager for an amendment to the project license involving movement of the project configuration.
- Project Manager, Silver State Photovoltaic Power Projects, NextLight Renewable Energy, LLC, Clark County, NV. Program Manager for 400 MW solar photovoltaic power plant project located in Clark County, Nevada. Prepared two Plans of Developments to support the Bureau of Land Management (BLM) Right-of-Way Applications for two projects (Silver State North and Silver State South) and developed environmental studies and permitting plans to support the BLM's National Environmental Policy Act (NEPA) compliance process for the project.
- Project Manager, WaveConnect Projects, Pacific Gas and Electric Company, Eureka, California. Project Manager for a 5 MW hydrokinetic pilot project located offshore of Eureka, Humboldt County California. Preparing a Hydrokinetic Pilot Project License Application before the Federal Energy Regulatory Commission for this project, one of the first proposed to convert the ocean's energy to electrical power in the world. Worked with a stakeholder and regulatory agency group numbering 50 persons to develop siting guidelines for the wave energy farm and onshore cable train, conducted environmental baseline studies and impact analyses, worked with numerous federal, state, and local agencies to prepare permit applications for this innovative project.

# CHARLES D. DIEP, P.E.

15664 LA SUBIDA DRIVE, HACIENDA HEIGHTS, CA 91745 (310) 315-2295 CDIEP@SOLARRESERVE.COM

#### **EDUCATION**

- B.S., Chemical Engineering University of California, Santa Barbara, 1989
- Certification in Environmental Auditing University of California, Irvine, 1992

## PROFESSIONAL REGISTRATIONS / LICENSES

- Professional Engineer Mechanical, California, (#M028869), 1993
- Certified Permitting Professional SCAQMD (#B4318), 1994

#### KEY EXPERIENCES

- Surround field central receiver solar power plant performance & modeling
- Surround field solar collection system design & analyses
- Solar resource & other weather parameters measurement, collection, evaluation and utilization
- Air quality compliance & permitting
- Air emission inventory, dispersion modeling & health risk assessment
- Air pollution control equipment specification, commissioning & source testing
- Environmental impacts assessment & studies

#### EXPERIENCE SUMMARY

Mr. Diep has over 20 years of environmental engineering experience characterized by successful completion of numerous environmental & engineering consulting projects for small to fortune 500 companies in industries ranging from energy, chemical, aggregates, pulp and paper, electronics, semi-conductors, biomedical, polymer processing and other manufacturing processes. Since joining SolarReserve, Mr. Diep has made significant contributions in the areas of plant performance modeling and analyses, operational concepts, solar resource assessment and evaluation, environmental factors that impact plant performance, collector field design and performance testing framework and methodologies. Mr. Diep has participated in design, design review, permitting and value engineering relating to the surround field central solar receiver technology.

#### EXPERIENCE HISTORY

SOLARRESERVE, LLC. – SANTA MONICA, CA (SENIOR PROJECT ENGINEER: 02/2009 – PRESENT)

Joined company as integral member of the technical team in the commercial development of concentrated solar-thermal power (CSP) plants. Participation and accomplishments include the following:

- Developed proprietary plant performance model for molten salt based CSP central receiver power plant
- Developed wind, temperature, solar irradiance and operational profiling models
- Working on impact assessments and providing permit support for various projects
- Specified, procured, commissioned and maintain solar met stations
- Completed & received DOE approval on technology life cycle emissions analysis
- Collaborating with design team in molten salt energy storage system
- Participating in value engineering for state-of-the-art CSP plant
- Participating in facility/system designs and project cost estimates
- Fulfill interim responsibility in project engineering for projects in Spain
- Participating in ASME performance test code development committee
- Evaluated potential hazards associated with reflected light and irradiance from solar collector field and receiver

FLUEGEN, INC. – IRVINCE, CA (PRINICIPAL: 07/2007 – 7/2008)

Co-found this start-up company with patented technology to control greenhouse gas (carbon dioxide) emissions and obtained financing. Help set up organization structure and operational infrastructure, and a R&D lab. Designed, procured the necessary components to build a bench scale demonstration air pollution control system. Drafted protocols, conducted testing and completed various analyses.

TRC COMPANIES, INC. – IRVINE, CA (SENIOR PROJECT MANAGER: 01/2006 – 05/2007)

Served as one of two key principals providing environmental engineering services in the west coast region to the energy industry. Worked on air pollution control projects for power plants, cogeneration facility, mining, aggregates and cement processing plants, liquefied natural gas (LNG) storage and distribution terminals. Also completed the air quality and health risk assessment sections of an Application for Certification to the California Energy Commission for a peak shaving power plant.

E5, INC. – GARDEN GROVE, CA (PRINICIPAL/DIRECTOR: 07/2001 – 1/2006)

Helped manage business and provided core consulting service in this air quality specialty firm that provides permitting and compliance services to numerous highly regulated facilities in the South Coast Air Quality Management District jurisdiction. Areas of expertise include emission modeling,

health risk assessment, emission banking, emission trading and compliance within Title V and market-based regulatory system.

MARKETPING, INC. – DIAMOND BAR, CA (CREATIVE/WEB DEVELOPMENT DIRECTOR: 01/1999 – 1/2000)

Directed and contributed extensively in the development of an online marketplace for environmental control systems, services and professional staffing. Directed a group of programmers and graphic artists to keep up with the high demand fast pace marketplace.

E5, INC. – DIAMOND BAR, CA (PRINCIPAL/SENIOR CONSULTANT: 07/1995 – 1/1999)

Co-founded this environmental consulting firm that provides essential environmental permitting, reporting and compliance services to various manufacturing plants located in Southern California. Contributed significantly in the development of local regulations and policies.

AQC ENVIRONMENTAL ENGINEERS – HUNTINGTON BEACH, CA (STARTED AS SENIOR ENGINEER & LEFT AS PRINICIPAL: 07/1989 – 6/1995)

Started career in this small environmental consulting firm and provided reporting and permitting services to small manufacturing firms in the coatings and finishing industry. Worked extensively in air toxics inventory plans and reports, waste minimization plans and stormwater pollution prevention.

# ANDREA GRENIER

Andrea Grenier is a seasoned regulatory strategist and project manager, with over 30 years experience in designing and implementing regulatory and permitting strategies for a variety of energy and water projects. For the past 12 years, she has run a successful woman-owned consulting practice, and has assisted numerous private and public entities develop, permit, and construct conventional and renewable energy projects in the western United States. Ms. Grenier specializes in preparing license and permit applications, managing the preparation of environmental impact documents as required by CEQA and NEPA, developing and implementing environmental mitigation and compliance plans, executing public involvement programs, and monitoring construction projects to ensure that all environmental permit conditions and requirements are met.

Prior to becoming a consultant in 1991, Ms. Grenier worked for nine years as an environmental project manager and regulatory specialist for Southern California Edison. Prior to that, she served as an energy analyst with the California Energy Commission.

**EDUCATION** B.S., Business Administration

California State University, San Francisco

PROFESSIONAL HISTORY Grenier & Associates, Inc.

Owner & President – 1997 to Present

Navigant Consulting (formerly Resource Management International, Inc.)

Director of Environmental Services – 1991 to 1997

Southern California Edison Company

Regulatory and Environmental Affairs Specialist – 1980 to 1989

California Energy Commission Energy Analyst – 1975 to 1979

PROJECT EXPERIENCE

## Solar Millennium LLC Blythe Solar Power Project, 2010 to Present.

Ms. Grenier is providing compliance management services to Solar Millennium to help ensure that the BSPP will meet all of its preconstruction compliance requirements as set forth in the CEC Final Decision so that construction can commence as planned by the end of 2010. Responsibilities include reviewing draft compliance plans prepared by the engineering and environmental consultants, preparing a compliance matrix for all 800+ conditions of certification, and assisting in liaison communications with the CEC's compliance project manager.

#### SolarReserve LLC Rice Energy Solar Project, 2009 to Present.

Ms. Grenier is currently working closely with SolarReserve to manage the proposed Rice Solar Energy Project through the California Energy Commission (CEC) licensing process. In addition to working with the engineering, environmental and legal consultants to move the Application for Certification through the state process, Ms. Grenier has also coordinated the review efforts of the two federal co-lead agencies, Western Power Administration and the Bureau of Land Management, to ensure that the CEQA and NEPA requirements are addressed in a timely fashion.

**NCPA Lodi Energy Center, 2008 to Present.** Ms. Grenier served as the environmental permitting manager on the Northern California Power Agency's proposed 255 MW Lodi Energy Center Project. The project's AFC was filed in September 2008 and was approved by the CEC in April 2010. The project is currently under construction and Ms. Grenier is now serving as NCPA's compliance project manager to ensure that the project is constructed in a manner that complies with all CEC and other regulatory agency permit requirements. The project is scheduled to become commercial in 2012.

**Pacific Gas & Electric Company, Colusa Generating Station, 2007 to Present.** Ms. Grenier initially completed an environmental due diligence analysis for this project, which PG&E purchased from Competitive Power Ventures in 2008. The project received its CEC license in 2008 and is under construction. Ms. Grenier continues to provide compliance management support to PG&E on an as-needed basis to ensure that construction of the project complies with all conditions of the CEC's Final Decision as well as other regulatory permits.

Pacific Gas & Electric Company, Gateway Generating Station, 2006-2008. In 2006, PG&E embarked on a new energy development program, of which the Gateway Generating Station was the first large power plant project to be constructed by PG&E in the last 20 years. Ms. Grenier initially provided due diligence support on the project and then served as PG&E's compliance project manager to ensure that construction of the project complied with all conditions of the CEC's Final Decision as well as other regulatory permits. Construction has been completed and the project is now operating as a generation resource for PG&E.

Roseville Electric, Roseville Energy Park, 2003 to 2007. Ms. Grenier served as Roseville Electric's environmental permitting and compliance project manager for the 160 MW Roseville Energy Park project in Roseville, California. After completing her responsibilities associated with obtaining the CEC license for the project in time to support a construction start date of summer 2005, Ms. Grenier worked with RE and the EPC to ensure that construction and commissioning of the project was done in manner that complied with all the conditions in the CEC permit as well as other applicable codes, laws, ordinances, regulations, and standards. The project completed construction and began commercial operation in 2007.

Silicon Valley Power, Pico Power Project, 2002 to 2005. Ms. Grenier served as the environmental permitting and compliance manager for Silicon Valley Power' 120MW Pico Power Project in Santa Clara. Ms. Grenier reported directly to the General Manager and had lead responsibility for obtaining the CEC license for the project via the CEC's expedited six-month licensing process. The project was successfully licensed by the CEC in September 2003 and Ms. Grenier's role changed to environmental compliance manager for the project. Ms. Grenier is proud to have played such an important role in a project that was permitted and constructed in just 3 years.

Project Manager



Resume

## Summary

Twenty five years of experience in capital construction projects in power generation and minerals recovery industries. Skilled engineering manager with diverse experience in solar-thermal, coal, natural gas, and nuclear power generation, as well as mineral mining and separation. Extensive involvement in engineering, construction, startup and commissioning of power plants on domestic and international assignments. Background includes nuclear plant operations, maintenance, and training; simple cycle, combined cycle, and coal plant design, engineering, construction, startup and commissioning; mineral mining and separation engineering, design and project management; and concentrated solar power plant development, permitting, engineering and design.

#### Experience

2009 - Present SolarReserve, LLC

2010 - Present Project Manager

Primary responsibility for managing project activities to support development, permitting, engineering as well as detailed design tasks for new projects. Currently working with Development to assist in the development and permitting of several new 100 - 150 MW concentrated solar power (CSP) facilities in various locations throughout the US Southwest. Scope of responsibilities include conceptual engineering and functional specifications for the project, site-specific studies to identify and mitigate any significant site environmental impacts (water supply, biological or cultural conflicts, etc.), assistance with the transmission interconnect engineering and design, development of heat balances based, input to support environmental permitting, data and analysis required for the CEQA, NEPA and other state/local permit processes, development of major equipment bid specifications, bid specifications for an EPC contractor, and development of overall project cost and schedule, health/safety/environment, and capital cost estimates and projected cash flows.

2009 – 2010 Senior Project Engineer

Responsible to provide engineering oversight and lead engineering and design efforts on several key projects. Assisted in developing the preliminary concept of operations document; developed detailed cost estimates; developed permitting and preliminary construction schedules; drafted the Project Description, Engineering and Operations sections to support submittal of an AFC document; developed a design criteria document; constructed the a project file folder structure to store and organize electronic files for the projects, and a preliminary project WBS structure. Collaborated on development of key design documents and preliminary engineering activities for the projects; coordinated the development of the project the O&M plan including preliminary O&M organization chart.

Project Manager



#### Resume

1999 - 2008 WorleyParsons Group, Inc.

2008 Business Development

Responsible for preparation of estimates, establishing new contracts including EPCM, engineering only, owner's engineer, and staff augmentation projects. Provided direct support for business development activities of Eastern Operations in both the Power and Minerals & Metals divisions. Coordinated the award of an engineering services contract to develop a new 500 MW solar project in Arizona. Worked closely with LightSource Renewables, LLC based in San Diego, CA to prepare the Plan of Development (POD) for the Bureau of Land Management (BLM) for the project. Secured the award of an engineering services contract to develop a \$75M placer gold mine project in Peru. Played a key role in the award of engineering support contracts for two \$80M simple cycle combustion turbine projects in Peru.

2005 - 2007 Project Manager

Tennessee Valley Authority (TVA). Managed a series of projects as "Owner's Engineer" involving the construction of a new 900 MW combined cycle facility, and the conversion of an existing 540 MW simple cycle facility with W501F units to a 940 MW combined cycle plant implementing a Toshiba Steam Turbine. Scope includes conceptual engineering, studies to determine any significant site issues (water supply, gas supply, etc.), assistance with the transmission interconnect engineering and design, development of heat balances based on equipment on-site purchased by TVA, input for environmental permitting and NEPA processes, bid specifications for HRSG's and other long lead equipment, bid specifications for the EPC contractor, and development of overall project cost and schedule including projected cash flow.

Managed several engineering and design services projects for TVA, including an extensive upgrade to a 1,200 MW fossil power plant to burn a 70% blend of Powder River Basin (PRB) coal including modifications required to maintain unit reliability, maintain compliance with current air and water discharge permit requirements as well as provide modifications to ensure the PRB fuels can be handled safely. The project included preparing specifications, procurement bid evaluations, bid award recommendations, coordination of deliverables, and construction support estimates. The scope included design reviews, participating monthly status meeting, and developing weekly status reports for all segments of the project, and includes schedules to accomplish the necessary plant modifications.

ILUKA Resources, Inc. Managed a project consisting of engineering and detailed design for the relocation of an existing mineral concentrator facility producing zircon, rutile, and ilmanite concentrate at a rate of approximately 300 tph to a new ore deposit site approximately 20 miles away. The project developed schedule options based on continued ore reserve developments at the existing deposit; optimized the schedule addressing issues concerning the relocation window; established a risk management plan related to capital cost estimates, operating cost estimates, schedule options and other potential risks; completed financial evaluations; successfully satisfied public concerns through a well executed permitting process; secured optimal water resources and required operating permits; and established a practically defined Project Execution Plan supported by risk analysis and proper strategy definitions.

Project Manager



#### Resume

2004 – 2005 Deputy Program Manager, Power Generation

Iraq Reconstruction and New Generation Projects, Project and Contracting Office (PCO), Baghdad, Iraq. Responsible for the restoration of seven existing oil-fired steam and combustion turbine power stations and construction of two new combustion turbine generating stations in the overall reconstruction of Iraq's electrical generation capacity. Managed and administered the \$1.71 billion Generation Sub-sector budget, and functioned as Deputy Finance Manager for the program. Interfaced with the Ministry of Electricity and Ministry of Oil to establish priorities for restoration of existing power generation units and development of new generating stations. Responsible for the procurement of over \$35 million in spare parts needed to support maintenance for the spring 2005 outage period, and prioritized shipments and deliveries to support production schedules. Assisted and provided direct support to the engineering manager including development of the engineering and design process model, as well as the document control procedures for the program. Directed the mobilization of 40 people to Iraq on schedule, managing all personnel assignments as the Assistant Business Manager.

2003 - 2004 Startup Coordinator

Hot Spring Power Project, Malvern, Arkansas. Coordinated all start-up activities with the commissioning team and subcontractors to complete installation and testing, place equipment and systems into service, maintain system punch lists, and manage the start-up plan and schedule. As acting plant Start-up Manager, completed initial backfeed from the 525 kV power grid, through the gas-insulated switchyard, to the generator step-up transformer a week ahead of schedule. Provided engineering, technical, and functional support; and facilitated resolution of all design/engineering issues through start-up and commissioning. Assisted the turnover coordinator to ensure turnover packages are properly defined, system scope established, and completion quantities correctly identified, by discipline.

2001 – 2003 Engineering Manager

Hot Spring Power Project, Malvern, Arkansas. Managed all engineering and design activities according to the contract, approved schedule and budget for the project. Senior WorleyParsons manager and primary client interface on the 700 MW combined cycle project consisting of two Siemens Westinghouse W501G combustion turbines, Nooter Eriksen heat recovery steam generators (HRSGs), and a Siemens KN-10.3 reheat steam turbine. Coordinated with the Program Director and Lead Discipline Engineers to develop schedules and budgets, managing the overall engineering budget of \$13.8 million, recognizing \$1.8 million in savings. Key interface between construction and procurement to sequence delivery of material and equipment to site to best support the project schedule. Assisted in site development and permitting activities including coordination with the client's environmental engineer and the Arkansas Department of Environmental Quality (ADEQ).



#### Resume

2000 - 2001 Startup Engineer

TE-TO Combined Cycle Power Project, Zagreb, Croatia. Responsible for engineering oversight and support during the critical transition from construction through commissioning on two GE 6FA dual fuel combustion turbines, Samsung HRSGs, and an ABB steam turbine. Spearheaded many design enhancements to mitigate problems encountered during start-up, including modifications to the blowdown, demineralized water, fire protection, and HVAC systems.

Integral member of the project start-up crew. Provided direction and support in commissioning the mechanical systems and major equipment. Played a key role in troubleshooting mechanical, electrical, and controls problems encountered during equipment start-up and testing. Developed many of the documents used throughout commissioning, including system functional test procedures and commissioning procedures. Designed and implemented a detailed operator and technician customer training program.

1999 - 2000 Mechanical Engineer

La Sierra Project, Puerto Nare, Colombia, South America. Responsible for mechanical system design, engineering, and specification of power plant equipment. Designed many of the mechanical systems for the project utilizing MicroStation™ and PDS™ CAD programs, completing design and initiating procurement weeks ahead of the project schedule. Modeled many of the systems using AFT Arrow™ and Fathom™ programs to ensure accuracy of design, and eliminate potential problems before the beginning manufacturing of equipment. Prepared bid requests and evaluated vendor quotes related to the purchase of equipment for the La Sierra project balance-of-plant systems, actively managing quality and price. Assumed an active role in the resolution of installation problems, contributing to project completion 21 days ahead of schedule.

1996 – 1998 PenPower (Contracted to General Electric Power Systems)

1999 Liaison Engineer

Integrated all electrical engineering activities between GE Industrial Systems, manufacturer of power plant electrical equipment, and GE Power Systems for all domestic power plant projects. Systematically merged electrical engineering activities to remove redundant processes and reduce per-unit engineering cycle time. Implemented design changes to bring products into compliance with NEC, NFPA, and OSHA standards. Eliminated non-standard designs to streamline the core product line and improve engineering efficiency. Results of cumulative actions aligned engineering budget of \$45.2 million to turn a net profit of over \$2.2 million for fiscal year 1999 from a 1.1% net loss in fiscal year 1998.

1998 - 1999 Project Engineer

Rabigh Power Plant Extension, Phase IV, Rabigh, Saudi Arabia. Comprehensive responsibility for the management and integration of all engineering and technical activities related to the



#### Resume

installation, start-up, and commissioning of the combined-cycle project. Equipment included four dual fuel GE Frame 7EA gas turbines, NEM Vogt HRSGs, and a GE three-pressure reheat steam turbine for the 460 MW plant.

Conducted all plant design reviews, monitored, and implemented all schedule changes and was single point-of-contact with the customer on all engineering issues. Provided critical coordination efforts between GE and consortium partner, Fluor Daniel, to analyze and eliminate boiler chemistry and steam quality problems in order to minimize delay in commercial operation. Liaison to provide resolution for fuel quality and delivery issues between consortium partner and vendor.

1996 - 1998 Training Manager

Akzo-Nobel Delesto II Project, The Netherlands. Negotiated and contracted training from several equipment vendors in Europe and the United States, implementing a six-month management, operator and maintenance personnel training program around a four-shift operator schedule. Resident on-site in The Netherlands on this Frame 9FA single-shaft, 360 MW combined cycle unit for the majority of 1997. Worked closely with GE's Start-up Manager conducting preparatory work to begin plant start-up and commissioning activities on schedule.

Samalyuca II Project, Mexico. Managed the GE scope of training for the 530 MW plant that included development of a new training manual format being used on all combined-cycle training programs for General Electric.

1985 - 1996 Nuclear Plant Operator, U.S. Navy

1993 – 1996 Lead Engineering Laboratory Tecnician, S7G Reactor Prototype

Managed the operations of Reactor Laboratory Division for a land-based prototype reactor plant test facility, including scheduling, directing, and monitoring all tasks and personnel, with responsibility for all nuclear and steam plant chemistry, chemical, hazardous, and radioactive wastes. As Engineering Watch Supervisor, directed eight nuclear plant personnel in all phases of reactor and steam plant operations including reactor physics and control rod testing. Played a key role in upgrading the plant's waste management program to comply with New York State DEC and Federal EPA guidelines. Coordinated radiological and quality controls efforts in the replacement of five reactor cooling system valves. Directed the installation of nuclear test equipment for determination of reactor hydraulic performance characteristics. Conducted installation and testing of new analytical equipment for measuring boiler water chemistry, aiding in implementation of the equipment and procedures throughout the Navy.

1990 - 1993 Lead Engineering Laboratory Tecnician, USS Oklahoma City (SSN-723)

Managed the operations of Reactor Laboratory Division for a Los Angeles class nuclear attack submarine, including administration of the Navy's Quality Assurance (QA) program. Developed and implemented the Radiological Controls Audit and Surveillance (RCAS) program for the ship following a complete revision of the Navy's Radiological Controls Manual. Provided

Project Manager



#### Resume

critical direction and QA supervision during the replacement of the ship's reactor coolant ion exchanger resin and filter media. Served as liaison between crew and support activity representatives to develop and implement radiological controls guidance used during the replacement of two reactor plant control and isolation valves. Developed and maintained an annual radiation budget for the ship to monitor and control crew radiation exposure. Played a key role in directing engineering personnel in conducting an emergency reactor plant start-up to get the ship underway prior to arrival of a hurricane.

1987 - 1990 Staff Mechanical Operator/Classroom Instructor, D1G Reactor Prototype

Instructed enlisted and officer students in theory, construction, and operation of a nuclear power plant in both a classroom environment and on-watch in an operating nuclear power plant. Developed an integrated training program for shipyard engineers with limited knowledge of the specific plant design to conduct chemical cleaning of the steam generators. Directed all training events for 15 production classes of approximately 30 students ensuring consistent, timely completion. Designated by the Chief of Naval Training as Master Training Specialist recognizing exceptional leadership, technical competence, and instructional methodology.

#### Education

B.S., Human Resources Management, New School University, 1990

Propulsion Engineering 'A' School, U.S. Navy, 1985

Naval Nuclear Power School, U.S. Navy, 1986

Principles of Naval Engineering, U.S. Navy, 1989

Engineering Laboratory Technician, U.S. Navy, 1989

Quality Assurance Inspector, U.S. Navy, 1990

Advanced Operational Water Chemistry and Radiological Controls, U.S. Navy, 1990

Quality Assurance Supervisor/Officer, U.S. Navy, 1992

Naval Leadership Development Course, US Navy, 1993

Naval Instructor Course, US Navy, 1993

Radiological Controls Maintenance Supervisor, U.S. Navy, 1994

Hazardous Waste/Mixed Radiological Waste Coordinator, Knolls Atomic Power Lab, 1994

Computer Skills:

MS Office®

MS Project®

MicroStation®

Project Manager



Resume

# Registrations/Affiliations

Universal HVAC Refrigerant Technician, 40 CFR 82, 1996 OSHA 10-Hour Health & Safety Certificate, 2006



# Thomas Priestley, Ph.D. Visual Resources Task Lead

#### Education

Ph.D., Environmental Planning, University of California, Berkeley M.L.A., Environmental Planning, University of California, Berkeley M.C.P., City Planning, University of California, Berkeley B.U.P., Urban Planning, University of Illinois

#### Distinguishing Qualifications and Relevant Experience

- More than 30 years of professional experience in urban and environmental planning and project assessment, specializing in visual assessment.
- Known nationwide for his expertise in evaluating aesthetic, land use, property value, and
  public acceptance issues related to a wide range of electricity facility projects, including wind
  power installations.
- Broad knowledge of methods used for siting electric generation, transmission and substation facilities, and mitigating their aesthetic, land use, and other environmental effects.
- Experienced in preparing documents responsive to the requirements of NEPA, CEQA, the USFS Visual Management System, and the California Energy and Public Utilities Commissions.
- Skilled in developing work programs and budgets, assembling and managing interdisciplinary project teams, providing quality control, and integrating study findings into appropriate documentation.

#### Representative Projects

Salton Sea Geothermal Unit 6, Mid American Energy, Imperial County, California. Assisted with the licensing of a 185-MW geothermal power plant, associated steam wells, and 31 miles of transmission line proposed for a site adjacent to the Salton Sea and the Sonny Bono Salton Sea National Wildlife Refuge. Conducted supplemental aesthetic analyses to respond to requests for additional information by the California Energy Commission, reviewed and critiqued the CEC Preliminary and Final Staff Assessments, and provided testimony at project workshops.

**Jefferson-Martin Transmission Project, Proponent's Environmental Assessment, San Mateo County, California.** Senior reviewer and consultant for an analysis of the aesthetic issues associated with the proposed replacement of a 14.7-mile segment of an existing electric transmission line with a 230-kV line on larger towers. The transmission line's location in an open space area prized for its scenic qualities and in proximity to affluent residential areas made the visual issues a sensitive and critical dimension of this project, requiring an intensive degree of analysis. Contributed to a detailed critique of the PUC's conclusions regarding project aesthetic effects. Prepared written expert witness testimony.

# Thomas Priestley, Ph.D.

**Inland Empire Energy Center, Riverside County, California.** Prepared the AFC visual resources analysis for a 670-MW natural gas-fired, combined-cycle power plant, associated gas compressor station, and 500-kV transmission line proposed for development in an urban fringe area located east of the City of Perris.

Tri-Valley Transmission Upgrade, Project Proponent's Environmental Assessment, Alameda County, California. Analyzed aesthetic issues associated with a system of new 230-kV electric transmission lines and substations proposed by Pacific Gas and Electric Company (PG&E) to upgrade service to the Livermore/Pleasanton/San Ramon area. Scoped issues and evaluated a large set of candidate routes to aid selection of a smaller set of preferred routes. Conducted detailed visual analyses of the preferred routes, wrote the draft of the visual analysis report, and proposed mitigation measures in preparation for filing a permit application with the California Public Utilities Commission (CPUC).

#### Visual Resource Impact Analyses of Gas-fired Power Plants, Various Locations, California.

Evaluated the potential visual resources impacts of 12 major gas-fired power plants proposed for a variety of urban and rural settings in both northern and southern California. Identified visual issues, designed the analysis strategies, contributed to development of architectural and landscape treatments, prepared visual resources analyses for the Applications for Certification for submittal to the CEC, reviewed and critiqued relevant sections of the Energy Commission's analyses of the projects, and evaluated the visual issues associated with CEC-proposed alternative sites. As an expert witness on visual resources, prepared written testimony and provided oral testimony in hearings before the CEC.

Altamont Pass Wind Resource Area Repowering, Alameda and Contra Costa Counties, California. Evaluated the potential visual effects of a program to replace existing wind turbines in the Altamont Pass area with a smaller number of larger, more efficient units. Prepared written analysis for inclusion in the Counties' environmental assessment under CEQA.

**Central Valley Energy Center, Fresno County, California.** Prepared the visual resources analysis for the Application for Certification (AFC) for a 1,060-MW natural gas-fired, combined-cycle power plant and associated 230-kV transmission line proposed for development in an agricultural area at the edge of the City of San Joaquin.

East Altamont Energy Center, Alameda County, California. Prepared the AFC visual resources analysis for 1,100-MW natural gas-fired power plant and associated 230-kV transmission line proposed for development in an agricultural area near Byron in the northern San Joaquin Valley. Prepared written testimony and testified as an expert witness on visual resources during hearings before the California Energy Commission (CEC).

Russell City Energy Center, Alameda County, California. Assisted with decisionmaking for the architectural design of a 600-MW natural gas-fired, combined-cycle power plant proposed for a highly visible location at the western gateway to the City of Hayward. Prepared the AFC visual resources analysis for the power plant and an associated 230-kV transmission line. Prepared supplemental analysis of the visual impacts of relocating a cluster of tall radio towers to a new location to accommodate development of the power plant. Prepared written testimony and testified as an expert witness on visual resources during hearings before the CEC.

# **Jerry Salamy**

# Senior Air Quality Task Lead

## **Education**

B.A., Chemistry

# **Relevant Experience**

Mr. Salamy has more than 22 years of experience, including assignments as Project Manager for numerous Applications for Certification (AFC) before the California Energy Commission (CEC). He has prepared numerous Prevention of Significant Deterioration Pre-Construction Air Quality Permit Applications, prepared project permitability studies, assessed industrial facilities compliance with state and federal air pollution rules and regulations, and assisted power plant clients with compliance-related issues.

#### **Representative Projects**

- SolarReserve Rice Solar Energy Project. Managed the preparation of the air quality permit and CEC license amendment Air Quality and Public Health sections for concentrating solar energy facility. The solar energy project included two dieselfired emergency generators, two dieselfired fire pumps, a wet surface air cooler, and energy storage commissioning facilities.
- GWF Energy Tracy Combined Cycle Conversion Project, San Joaquin County, California. Managed the preparation of the AFC, the air quality permit, and AFC Air Quality and Public Health sections for the conversion of an existing peaking plant to a combined-cycle baseload facility consisting of two natural-gas-fired turbines, fired heat recovery steam generators, steam turbine generator, and associated equipment.
- Diamond Generating Mariposa Energy Project. Managed the preparation of the air quality permit and CEC license amendment Air Quality and Public Health sections for a 200-megawatt peaking power plant. The peaking power plant included four natural gas-fired LM6000 PC combustion turbines, a diesel-fired emergency generator, and a diesel-fired fire pump.
- **GWF Energy Hanford and Henrietta Combined Cycle Conversion Projects.**Prepared the air quality permit and CEC license amendment Air Quality and Public Health sections for the conversion of two existing peaking plants to combined-cycle baseload facilities. The combined cycle facilities included two natural-gas-fired turbines, fired heat recovery steam generators, steam turbine generator, and associated equipment.

# **Jerry Salamy**

- Chevron Richmond Power Plant Replacement Project. Managed the preparation of the AFC, the air quality permit, and AFC Air Quality and Public Health sections for the replacement of steam generating equipment with a new combined cycled cogeneration facility at the Chevron Richmond Refinery. The Replacement project included a natural-gas-fired turbine, fired heat recovery steam generator, and associated equipment.
- AES Highgrove Power Project. Prepared the air quality permits and AFC for 300-megawatt peaking facility consisting of three natural-gas-fired turbines and associated equipment. The project will employ General Electric's LMS100 combustion turbine generators that integrate new technology to increase the combustion turbine's efficiency above existing turbine technologies.
- City of Vernon Power Project. Prepared the air quality permits and AFC for 914-megawatt baseload facility consisting of three natural-gas-fired turbines and associated equipment. The project would employ Siemen's Rapid Start combustion turbine generators that integrate new technology to decrease the facilities start up duration over existing turbine baseload technologies.
- Power Plant Licensing and Permitting Program, Calpine Corporation. Project
  Manager for several AFCs before the CEC for Calpine's Delta Energy Center in
  Contra Costa County, East Altamont Energy Center in Alameda County, Los
  Esteros Critical Energy Facility in Santa Clara County as well as AFCs for three
  peaking power plants licensed under the CEC's emergency AB970 licensing process.
  Managed multidisciplinary teams of scientists, planners, and engineers in preparing
  and filing the license applications, preparing Data Request Responses, attending
  workshops and providing expert testimony before the licensing hearings. Also
  prepared preconstruction monitoring plans and provided construction monitoring
  and compliance services.
- Sutter Power Plant Application for Certification, Calpine Corporation, Yuba City, California. Managed the preparation of the air quality section of Calpine Corporation's Sutter Power Plant AFC. The air quality analysis required the preparation of an environmental setting for the project site, a criteria and toxic pollutant emission inventory, a best available control technology analysis, and air dispersion modeling. These analyses were used to support the preparation of a Prevention of Significant Deterioration and New Source Review permit applications. These applications were submitted to the EPA's Region IX office and the Feather River Air Quality Management District for the issuance of a construction permits. The scope of work also required the identification of emission reduction credits (ERCs) to support the New Source Review permitting process.

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#### **SUMMARY:**

Mr. Snell has over thirty years of successful professional practice in Southern California real estate development, project management, civil engineering, planning and project advocacy on projects ranging from small multi-family developments to large scale master planned communities as well as small retail to large scale industrial projects. He has extensive experience in the planning, design and execution of developments including very successful as well as award winning projects. With a background in civil engineering and surveying and a proven track record of resolving complex issues with win-win results. Mr. Snell views development with regard to local and regional issues, the needs of the community and compliance with local, regional and federal requirements. He has gained a full working knowledge of NEPA, CEQA, state and local zoning and development codes. He understands how projects affect the environment, issues such as water quality, traffic, air quality, land use compatibility, and agency challenges. He also has a deep understanding of the impact and benefits projects have on the local economy. Through his experience as a planning commissioner, Mr. Snell has also established himself as an excellent meeting facilitator and a very good listener. Mr. Snell has established a long successful track record for accountability on all the projects he has managed.

John was born, raised and has lived his entire life in the area known as the Inland Empire. The experience, knowledge and relationships from this have been very valuable for John and the projects he has been involved with. John's father, Mr. William Snell, is a well known and long practicing civil engineer in the Inland Empire. From a very young age John would join his father on job sites and actually assist in site assessments, review of site and drainage conditions. This allowed John to enter into the field professionally at a very young age and progress quickly, taking on project responsibilities very early in his career.

In 1987 Mr. Snell, with other members of the community, formed the Indian Hill Alliance. This group was interested in bettering the area of Indian Hills, getting information out to the community, and providing a forum for the community to raise and address issues with local agencies and decision makers as well as project proponents. Mr. Snell has been involved in volunteering and helping to shape his community for many years. In 1992 he volunteered for several days providing communication and coordination assistance for relief of the Landers Earthquake. This inspired Mr. Snell to obtain his amateur radio license and be an official first responder for the County of Riverside..

Mr. Snell's involvement with the community and his technical expertise led to his appointment to the Riverside County Planning Commission by Supervisor John Tavaglione in February 1995. Mr. Snell still holds this position and has been elected by his peers to be chairman several times. Riverside County has been the most active jurisdiction in the state of California during Mr. Snell's tenure. During the 1997 term, Mr. Snell was chairman for the Eagle Mountian Landfill and the El Sobrante Landfill. These projects were of national prominence and were extremely controversial. Some hearings had as many as 600 people, all with very strong held beliefs and a strong desire to make their views known. Mr. Snell conducted these meetings without incident and with respect to all parties. During the 2002-2003 term the Commission spearheaded an update to the county's general plan. Hearings were scheduled throughout the county over an 18 month time period. Mr. Snell was elected chairman for 2 consecutive terms so he could preside over these hearings, unprecedented in Riverside County.

## Notable Skill sets:

Computers: Mr. Snell is well versed in Windows operating systems XP and 7. He is an advanced user of Excel, Outlook, Work, Microsoft Project and Adobe Acrobat. He is well versed with PowerPoint.

Agencies & Interested Parties: Mr. Snell has demonstrated a valuable ability to quickly develop relationships with local, state and federal agencies as well as interested third parties such as neighbors, community interest groups and environmental groups. During his career Mr. Snell has worked with most of the city and county governments in Southern California, as well as several state and federal agencies.

Agreements and Technical Documents: Mr. Snell has prepared, reviewed, amended and advised on Zoning Ordinances, County Ordinances, Letters of Interest, Purchase Agreements, Consultant Agreements, Memorandums of Understanding, State and Local Agency License Agreements, Tri and 4 Party intergovernmental agreements as well as project conditions of approval. Mr. Snell has also been deeply involved with the CEQA and NEPA processes. He is familiar with the timing and hurdles that these regulations create. He is also accustomed to working closely with consultants and attorneys as they propose and prepare technical or expert studies, reviewing these studies to be sure all necessary items are addressed

property and then working with the consultants and attorneys as they address agency and public comments. Mr. Snell is also frequently required to "translate" these technical documents and their findings into language or analogies that can be understood by non-technical members of the team.

#### **CURRENT VENTURES:**

Aurora Consulting, Riverside, CA

#### President

Founded company in 1994 with the directive to develop, partner and consult on various real estate projects including multi-use, single-family, multifamily and commercial developments along with expert witness testimony, the most recent case (2009, Sacremento, Ca) being AKT vs. C&C Ranch, working for Jones Day as a project acquisition expert.

Riverside County Planning Commission

#### Commissioner, 2nd District

Appointed in February, 1994 to present day

Appointed by Supervisor Tavaliogne. Review, modify and provide recommendations to Board of Supervisors for projects and enforcement actions. Includes dealing with public, applicants, staff and agencies in public and private settings. Requires working knowledge and implementation of county ordinances, zoning and general plan policies.

Mission Development, Redlands, CA 2005 to 2008

#### Partner - Project Management, Planning and Design

Joined a real estate development venture in 2005 that was formed in 2003 with 2 projects: in charge of project management, specific plans, EIR, technical studies, strategies, planning and design.

Greenspot Village & Marketplace – 750,000sf retail, 800 residential unit Mixed Use Community.

DeerPark – 200 Acre Residential Mixed Use railroad adjacent project.

Company has gone dormant due to lack of funding.

American Pacific Homes, Montclair, Ca 1998 to 2005 full-time, 2005 to present part-time

#### Executive Vice President, Planning and Engineering

- Member of the executive team for a local developer/homebuilder with 2 others. Responsibilities included project acquisition, preliminary entitlements, construction entitlements, DRE filings, HOA formation and training, supervise project management staff, assist construction department, assist customer service department and assist the sales department on a multitude of projects throughout Southern California including large and small lot single family subdivisions, single family condominiums, multi-family condominiums, large and mid scale master planned communities. Prominent projects include Mission Creek Development in Loma Linda and Rio Vista Specific Plan in the Rubidoux area of Riverside County.
- Acquisition responsibilities included preparation of feasibility studies, review of project site and planning conditions, review of all available technical studies, review of fees and all anticipated costs, meeting with local agencies as necessary to determine current project status as well as anticipated project entitlements. Reviewed and/or prepared offers, letters of intent and purchase and sale agreements. Frequently was the primary contact with brokers and buyers when we were selling a project. Also formed project team of consultants and experts in preparation of preliminary entitlements.
- Preliminary entitlements are tentative maps, development plans, site plans or specific plans with associated mitigated
  negative declaration or environmental impact reports. Responsibilities include assembling the consultant team, establish
  and maintain project budgets and schedules, plan project with appropriate team and coordinating appropriate level of
  collaboration. Liaison and project advocate with project neighbors, adjacent developers, local agency staff, commissions
  and decision makers. Review all project technical studies, staff reports, conditions of approval, environmental studies,
  and development agreements and lead negotiations on all of these.
- Construction entitlements are the project construction drawings and obtaining of construction permits and filing of
  final maps. Responsibilities include preparation and maintenance of project budgets and schedules. Assembled and
  managed project team and reviewed project plans, specifications, studies, reports and plan check comments. When
  project management staff was available, also supervised, trained collaborated with them. Acted as lead advocate with
  agency plan checkers and coordination between project team members.
- DRE (Department of Real Estate) filings are required for projects under the direct jurisdiction of a county and projects with home owners associations including condominiums. Includes the preparation of Conditions, Covenants and Restrictions in compliance with state and local guidelines and the project conditions. Coordinated with project attorney, title company and HOA budget consultant. Included determining project phasing and preparation of HOA by-laws.
- HOA (Home Owners Association)Formation and training typically included hiring the management company, assuming the role of HOA president and presiding over the HOA meetings for the first year as a minimum and up to

three years. Role as liaison and often informal arbitrator between home owners and company. Gained deep understanding of the laws and procedures for HOAs and was able to assist HOA's in establishing correct procedures, by-laws, budgets and reserves for their long term viability.

- Assist construction and sales department included regular meetings, review and assist in project bidding documents, sales contract, sales office site planning and overall sales program.
- Miscellaneous duties included working with attorneys whenever litigation was brought to the company and closing out projects by obtaining the release of bonds and any final paper work with the local agency.
- Projects were located in Riverside County, Cities of Rancho Cucamonga, Ontario, Oxnard, Anaheim, Riverside, Elsinore, Monterey Park, Murrieta and Temecula.

#### PRIOR EMPLOYMENT:

Concordia Homes, San Bernardino, Ca 1995-1998

#### **Executive Vice President**

- Member of the executive team for a local developer/homebuilder with 4 others. Responsibilities included project acquisition, preliminary entitlements, construction entitlements, supervise project management staff, assist in the establishment of out of state divisions, assist construction department, and assist the sales department on a multitude of projects throughout Southern California including single family subdivisions, single family condominiums, multi-family condominiums, large and mid scale master planned communities.
- Assisted in the establishment of divisions in Colorado and Las Vegas. Assisted in project acquisition, project management and general operations until local staff could be brought on and trained.
- Projects were located in the County of Riverside, Cities of Rancho Cucamonga, Victorville, Apple Valley, Yucaipa, Oxnard, Ventura, Riverside, San Bernardino, Pasadena, Adelanto, Murrieta and Temecula.

Adkan Engineers, Riverside, CA 1985-1995

#### Vice President

- Joined company when it had 2 employees in engineering division and developed this into an engineering staff of 35 employees, all hired, supervised and trained by Mr. Snell. Responsibilities included project management, project design, site planning, strategic planning, supervision of staff, client interface, preparation of project proposals, contracts, coordination of vendors and sub consultants, review of all project plans and studies which were prepared under his authority. Assisted survey department as needed with plan review, dispute resolution and field meetings on construction issues. Occasional work as expert witness on third party disputes and as a witness for actions against company.
- Projects within San Bernardino, Riverside, Orange and LA Counties and several dozen cities. Work included residential, commercial, industrial, public works and private/public joint ventures.

Wes Engineer, San Bernardino, CA 1980-1985

#### Project Engineer, Project Manager, Surveyor

- Responsibilities included project design, boundary and construction surveying, preparation of drainage studies, water /sewer demands and needs analysis, traffic studies; street, sewer, water, storm drain, grading plan design and preparation; project management and processing.
- Projects included the initial planning, studies, boundary survey and layouts for East Highland Ranch.
- Projects were locating in San Bernardino County and city, cities of Victorville, Redlands, Rialto, Highland and Red Mountian, Ca.

### **EDUCATION:**

California State University at Fullerton, coursework in civil engineering, San Bernardino Valley College, coursework in general engineering, California Polytechnic Institute review and instructional courses in preparation for Engineer In Training exam and Professional Civil Engineering exam

Continuing education and seminars in various subjects, including environmental issues, land development, real estate law, land use studies, project management and personal growth.

#### **Professional License:**

Professional Civil Engineer in the State of California, RCE 47867, Aug 1991

#### PARTIAL LIST OF PROJECTS:

Greenspot Village & MarketPlace, Highland, CA – Mixed Use (Retail, Office, SFD, Apartments, Condominiums) Rio Vista Specific Plan, Riverside, Ca – Mixed use residential plan 947 acres, 1,600 homes East Highlands Ranch, Highland, Ca – Masterplanned Community

Rancho Etiwanda Estates, Rancho Cucamonga, Ca-Residential Master Planned Community

Rancho Vista, Rancho Cucamonga, Ca – Several Single Family Projects

Pointe Premier, Anaheim Hills, Ca- high end semi-custom homes

Pacific Pointe, Oxnard, Ca-senior duplexes

Mission Creek and Mission Lane, Loma Linda, Ca-small lot residential with TND principals

Pacific Breeze, Oxnard, Ca - small lot detached condominiums

Pacific Ponte, Oxnard, Ca- small lot detached condominiums

Heritage Estates, Rancho Cucamonga, Ca - large lot single family

Hidden Canyon, Riverside – large lot custom homes

Rancho Park, Rancho Cucamonga, Ca-duplex homes

Hastings Ranch Terrace, Pasadena, Ca-Multifamily condominiums

Estate Hill, Rancho Cucamonga, Ca-semi-custom homes on large lots

Bryant Park Estates, Yucaipa, Ca-large lot single family

Monterey Views Estates, Montery Park, Ca- Large homes on small pads

Apple Valley Estates, Apple Valley, Ca – mixed single family and duplex homes



Resume

#### SUMMARY

Mr. Tietze is a Professional Geologist, Certified Hydrogeologist and Certified Engineering Geologist in California. He has over 25 years of experience performing and managing environmental assessment, water supply, permitting, compliance and remediation projects. Over his broad career, Mr. Tietze gained expert knowledge of project management, surface and groundwater hydrology, environmental regulatory compliance, project planning and development strategy, industrial decontamination, and environmental impact assessment. He has participated in and managed many multi-disciplinary environmental assessment teams, and worked closely with a variety of industrial, commercial, utility and municipal clients. Mr. Tietze is currently located in WorleyParsons' Folsom office, where he is the Location Manager for the WorleyParsons Infrastructure & Environment group and supports the WorleyParsons Power Engineering group on site selection studies, project constraint and feasibility evaluations, water resource studies and environmental permitting for renewable energy and other power projects throughout California and in the western states. In addition, Mr. Tietze manages environmental investigation and cleanup projects, water resources impacts analyses, and regulatory liaison for a variety of industrial and municipal clients.

#### **EXPERIENCE**

2004 - Present Sacramento Location Manager, WorleyParsons Infrastructure & Environment

#### **Siting/Constraints Analysis**

Managed opportunity and constraints analysis of 8,000-acre property in Wyoming underlain by coal deposits. Uses evaluated included ranching, planned development, coal mining, coal bed methane extraction, coal power plant, IGCC power plant and synfuel plant. GIS analysis of environmental constraints, land ownership, gas pipelines, water availability, transmission and roads. Developed matrixes comparing regulatory requirements, permit lead times, environmental, engineering and financial constraints and opportunities. Developed high level cost estimates for coal mining, IGCC power plant, and synfuel plant.

Managed selection of candidate sites for concentrating solar power plant (CSP) development in the jurisdictions of four utilities in California. GIS-based analysis was based on insolation, topography, avoidance of sensitive managed lands and proximity to transmission, gas and potential cooling water sources. Specific parcels were identified for further consideration.

Managed CSP site selection for a major utility using geospatial approach that combines environmental, engineering and economic criteria. Several regions were screened for overall ability to support project needs (insolation, transmission, water, gas and land availability) and constraints (topography, zoning, sensitive habitat and land use). A list of refined ranking criteria was developed weighted based on potential influence on overall project costs and revenue. A grid was established across a broad study area, the cost and revenue were summed for each grid node, contoured and overlain with the outlines of potentially available parcels. The project provided the client with a tool to evaluate and compare specific parcels for potential acquisition based on revenue and relative cost, including externalities.

## **Environmental Permitting and Compliance**

Managed environmental permitting and mitigation measure implementation for design and construction of high voltage AC/DC converter stations as part of the San



Resume

Francisco Trans Bay Cable project.

Managed preparation of design, operation and maintenance plan for an evaporation pond and bioremediation land farm unit at a power plant in the Mojave Desert. The impoundments were permitted as Class II Surface Impoundments.

Managed preparation of an Aquifer Protection Permit for an evaporation pond and bioremediation land farm unit for a solar power plant in Arizona.

Estimated environmental compliance costs associated with decommissioning a power plant in Watsonville, California. Costs evaluated included management and removal of hazardous materials and waste, asbestos and lead-based paint surveys and abatement, and post-decommissioning confirmation sampling.

Prepared a Decommissioning and Reclamation Plan and cost estimate for a large solar power plant on BLM land in the Mojave Desert.

Performed investigations in support of a Section 404 Permit for levee removal for a farm bordering estuarine wetlands in Bolinas.

Managed evaluation of hydrology and water quality, hazards and hazardous materials, and public utility sections of a CEQA EIR for a controversial commercial project impacted by limited water resource availability in an overdrafted basin.

Managed CEQA evaluations and preparation of a Conditional Use Permit application for a proposed biodiesel plant.

#### Hydrogeology

Managed groundwater studies under NEPA for Indian casino and hotel projects in Rohnert Park, Lakeville, Madera and North Fork California, and in Louisiana. Assessed the impact of groundwater supply pumping on regional groundwater resources and nearby water supply wells. Work included evaluation of hydrogeology, groundwater level trend analysis, regional and local groundwater demand, modeling of interference drawdown and recharge loss, and impacts on specific wells. In addition, levels of significance were evaluated and mitigation measures were proposed and evaluated.

Managed groundwater resources investigations for solar power projects in California, Nevada, Arizona and New Mexico, including test well programs to over 1,800 feet depth, aquifer testing programs, numerical or analytical modeling programs, and assessment of project and cumulative impacts to water and biological resources.

Managed geophysical investigations of aquifer characteristics and hydrostratigraphy using time-domain electromagnetics and seismic refraction at three sites in California.

Well and stratigraphic evaluation using geophysical borehole logs, well tracer dye testing and pumping tests to assess well and formation hydraulic and water quality profiles.

Managed geophysical investigation of subsurface soil conditions using shear wave velocity profiling and seismic refraction.

Managed modeling of groundwater drawdown impacts, changes in water budget

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and changes in surface water flow from development of a groundwater supply for the Cache Creek Casino in Yolo County, California.

#### **Contaminated Sites**

Managed investigation, feasibility and cost recovery litigation for 40 dry cleaner sites in the City of Merced.

Managed groundwater monitoring, plume and hydrostratigraphic interpretation for the Central Truckee Meadows Remediation District in Reno and Sparks, Nevada.

Managed the monitoring of multi-completion nested sentinel monitoring wells throughout the City of Dinuba to assess potential impacts by MTBE. Reviewed investigation and cleanup efforts throughout the city on an ongoing basis.

#### 2003 - 2004 California Operations Manager, TetraTech MFG

#### 1994 - 2003 Senior Hydrogeologist, TetraTech MFG, San Francisco, California

Environmental Assessment and Permit Compliance Review for a wood-waste biomass power plant. Work included compliance evaluation of water discharge, air emissions, storm water management, groundwater monitoring, ash disposal, and other waste management.

Managed audits of a large portfolio of forest products industry sites for compliance in the areas of storm water (SWPPP and SWMP); Spill Prevention Control and Countermeasures (SPCC); waste/hazardous waste management; hazardous materials management; domestic water supply monitoring; landfill monitoring and closure; hazard communication; and Toxic Release Inventory (TRI) reporting.

Performed and managed hydrostratigraphic and contaminant transport evaluations for Federal and State Superfund sites.

In support of developing a Total Maximum Daily Load (TMDL) for mercury in the Guadalupe River Watershed, conducted a survey of the extent, stability and transport of dispersed mercury mine tailings in the New Almaden Mining District and all streams tributary to the Guadalupe and Alamitos Creek watersheds.

Prepared a risk management plan for long term management of a contaminated site under construction and operations scenarios. The plan included an evaluation of potential human health risks and specified control and management measures for facility maintenance and soil management during construction.

Managing city-wide multi-depth groundwater monitoring program to protect and manage a municipal well field in an area impacted by MTBE.

Managed investigation and cleanup of pentachlorophenol (PCP) and dioxins adjacent to a sensitive estuary. Because of the high dioxin concentrations, work was conducted in Level B and Level C PPE, an air monitoring program was implemented and excavation equipment was tested to confirm decontamination.

Consultation regarding waste management and control of environmental releases during demolition of a large paper mill. Work included waste characterization,



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evaluation of demolition options for a power boiler with hazardous waste residue, characterization of dust in site buildings for lead, and consultation regarding contractual disputes with the demolition contractor.

Managed decontamination of facilities affected by PCBs, asbestos, beryllium dust, metal residues and lead-based paint. Prepared plans for decontamination, sampling and analysis, health & safety, and waste management, then oversaw and documented implementation of the work.

# 1985 - 1994 Associate Geologist, Lowney Associates, Mountain View, California

Managed evaluation of hazards and hazardous materials sections of a CEQA EIR for the Lincoln Auzerais Specific Plan in San Jose, and for the San Jose Horizon 2020 General Plan.

Environmental management for reclamation of a quarry in asbestos-containing serpentine. Tasks included characterization sampling; baseline air monitoring; test plot grading, air monitoring and emissions modeling; development of a reclamation/grading plan to safeguard public health for anticipated commercial and residential end use; development of site controls and safe work practices; and construction quality assurance and air monitoring during quarry reclamation.

Performed fault rupture hazard investigations for sites located on the Hayward, North Calveras, South Calaveras, Silver Creek, and Monte Vista Faults. Performed engineering geologic, seismic hazard and slope stability investigations for a variety of residential developments in California.

#### **EDUCATION**

Graduate Studies in Hydrogeology (Completed course work for Master of Science) - San Jose State University

B.S., Geology - San Jose State University, 1984

#### **REGISTRATIONS/AFFILIATIONS**

Professional Geologist - California, No. 5698

Certified Hydrogeologist - California, No. HG 63

Certified Engineering Geologist - California, No. EG 1803

#### PUBLICATIONS/PRESENTATIONS

Contributing author of A Landowner's Manual, Managing Agricultural Irrigation Drainage Water – A Guide for Developing Integrated On-Farm Drainage Management Systems, developed for the California State Water Resources Control Board.

Principal author of *Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance*, a public works operation and maintenance manual intended for use in Sonoma, Marin, San Mateo, Santa Cruz and Monterey counties. The manual identifies BMPs for compliance with requirements related to Endangered Species Act listing of Coho Salmon and Steelhead Trout.

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